NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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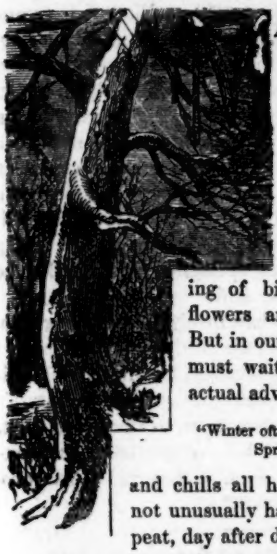
CALENDAR FOR MARCH.

"The seasons alter: hoary headed frosts
Fall in the fresh lap of the crimson rose;
* * * * the Spring, the Summer,
The chilling Autumn, angry Winter, change
Their wonted liveries; and the amazed world,
By their increase, now know not which is which."



MARCH.—Spring has now come, at least in name. Around the word *Spring* cluster a thousand pleasant associations. It is suggestive of soft airs and gentle breezes, and the singing of birds, and opening flowers and green leaves.—But in our northern clime we must wait patiently for its actual advent, for

"Winter often lingers in the lap of Spring,"

and chills all her ardors, and we not unusually have occasion to repeat, day after day, the invocation:

"Come, gentle Spring, ethereal mildness, come."

In more southern latitudes and more genial climes, March is a pleasant, sunny month. In our southern States the gardens are often planted in MARCH. The ground is prepared for corn and cotton, and much of the seed put in. But MARCH is by no means to be an idle month with us northern farmers. The wood is to be cut and split and piled up. The posts and rails to be got ready for use. The walls thrown by frost or cattle, to be repaired or new portions laid. If the frost is out of the ground, posts may be set, and all the fences put in order. Farm implements should be looked to, and every one of them put in complete repair. If a new point is wanting to a plow, do not wait till it is time to begin plowing, but procure one now, so that when team and men are ready there shall be no delay. Get all the chains mended, and overhaul the harnesses, and if you find any weak parts, either mend them yourself or take them to the harness-maker. It will be vexatious to have a buckle draw out or a strap break while you are plowing or hauling a heavy load of manure, and have to turn out the team and lose half a day in getting it mended. See, also, that the harnesses are well oiled, and that collars and hames and yokes all fit well, so that when you come to put them in motion, the work shall go on rapidly and pleasantly to both man and beast. The noble horse that exerts his strength in our service, is entitled to all the relief that can be derived from a well fitting harness. An easy, well-adjusted yoke for the oxen will contribute much to their comfort. We saw some yokes at the Agricultural Exhibition in Boston, last October, that might almost tempt the patient ox to desire "to pass under the yoke." With good harnesses and yokes and plows suited to the work to be done, and constructed upon scientific principles, it is surprising with how much more ease to the beast, and pleasure and satisfaction to the plowman, the work can be done.

All kinds of stock should be well cared for this month. The oxen should be so fed that they may be in good heart for the season of hard labor that is before them. The cows must by no means be neglected. If cows are reduced in flesh in the spring, it takes half the summer for them to recruit, and of course the profits from them is small.

Sheep require special attention this month. A pint of oats a day, or a few turnips cut fine, to each of your ewes, will be amply repaid by more vigorous lambs and the better health of the sheep. See that their pens and yards are kept dry, lest you find the foot-rot among them, before you suspect it. MARCH is considered a trying month for all kinds of stock. They have been so long without green food, that they begin to suffer for

the want of it. If you have kept a portion of carrots or ruta-bagas for this season, they will supply the wants of the animals better, probably, than any other kind of food.

MARCH is the time to fit up the hot-beds. Every farmer may have, at trifling cost, a few square feet covered with glass, to bring forward at least some early tomatoes, cabbages and cucumbers. Dig out a space as large as your glass will cover, about eighteen incnes deep. Add to the top of this ten or twelve inches of horse manure, and cover it with four inches of good soil, and sow the seeds, put on the frame and cover with the glass. Or a pile may be raised without digging, and the frame set upon it, banking up about the edges with the warm loam and manure. It must be six or eight inches larger each way than the frame. When the plants grow so as to reach the glass, the frame may be gradually raised out of their way, and in this manner strong and vigorous plants may be plentifully supplied. The nearer the plants are to the glass, the better they will grow. Raise the glass in the middle of pleasant days, and occasionally sprinkle with the watering-pot. The fermenting manure will keep the soil warm at the bottom, and the sun will warm the top, and thus the germinating seeds will find a warm soil and warm air, which will put them forward some two or three weeks earlier than they would come in the open air, and you will have fine, thrifty plants to set out about the time seeds are usually sown in garden beds.

When all this has been done, use some slight cover to protect them from the cold night air, and, if needful, from the black flies and other insects, and you will have nice tomatoes and cucumbers and cabbages, that you will enjoy very much. Now this may seem a small matter to many farmers, and not worth the trouble—but if tried will be found one of those little things that contribute to the pleasures of life—that keep us cheerful and contented and in a happy frame of mind. You will watch the growth of these plants, green and vigorous before anything around them shows itself above the ground, with great interest. They tell us of what is coming. They strengthen our faith in the certainty of the results of nature's arrangements, and encourage our hopes in the future. There is a satisfaction in getting our early mess of peas, or radishes or lettuce, that well repays all the trouble they cost.

On the twenty-second the sun will have completed half his annual journey towards the north, and have reached the equator, and the days and nights will then be equal. Thenceforward, until the sun shall have reached the northern tropic, or turning point, the days will be gaining upon the nights, and the soil will then receive more heat from the sun in the long days, than it will throw off by radiation in the short nights. Hence the heat will accumulate in the soil. This will go on till the twenty-fifth of July, or a little later, after which the days, having become considerably shorter, the nightly radiation about equals the heat received during the day.

Within the tropics there is but little comparative difference in the length of the days during the year, and the sun's rays fall perpendicularly upon some portion of the torrid zone the whole year. Hence the mean temperature of that portion of the earth, for the year, is much greater than that of those portions upon which the sun's rays fall more obliquely. But Nature, who is ever wonderfully fruitful in compensations, has provided an offset, by lengthening the days of summer, so that although the sun's rays fall more obliquely, they fall for a much longer part of the twenty-four hours. Hence, what is wanting in intensity is made up in time, and even more than made up, for the amount of heat received by the soil, above that given off by radiation, is greater during the three summer months, at fifty degrees from the equator, than it is at twenty-five. Hence, the wonderful rapidity with which the processes of vegetation are completed in northern climates.

It is well known that corn, in Canada, will spring up and accomplish its growth and ripen, in very much less time than it will in Florida. In the extreme north the early violet opens its delicate petals, and peeps out from under the receding snow, and the green springing grass marks the edge of the melting drift.

How wonderful, how involved and interwoven, and yet how simple, are all the works of nature! How great, how benevolent, how incomprehensible is HE who planned and executed all nature's works! Let us, then, learn to adore and trust, and commence the labors of another spring, encouraged by HIS promise that *"seed time and harvest shall never fail."*

SHROPSHIRE DOWN WETHERS.

This variety of sheep is spoken of as being black or grey faced and short wooled. In a *Mark Lane Express* report of a meeting in England, at which a pen of the Shropshire Downs were exhibited, they were noticed thus: "We especially admired Mr. Smith's prize wethers, for their splendid quality of meat, broad chines, and full plaits and wonderfully good loins and rumps." The breed is said to have descended from a hardy mountain variety, having an excellent constitution. Their favorable reputation is increasing rapidly in England. They come to maturity at an early age. The London *Farmer's Magazine*, from which we condense the above, says: "The Shropshire sheep have excellent form and symmetry, first class wool of thick pile, and great length of staple, well-formed, good dark brown heads, deep chests, famous legs of mutton, with a good dock set high on a straight, long spine.

EXTRACTS AND REPLIES.

MANURE—ASHES.

What is the best method of applying manure to the land, to spread or apply it to the hill?

Are not ashes good for dryish lands?

L. C. DARLING.

Westminster, Vt., Jan., 1858.

REMARKS.—As a general rule, it is the quickest, easiest, and most economical way to spread manure and plow or harrow it in. If some warm and stimulating substance could be applied to the hill where corn is planted, it gives it an early start, and is very useful. Ashes are excellent for this purpose, and so are the droppings of the hen-house, mixed with muck, loam or sand.

Ashes are useful on most lands, but especially on soils that are rather dry.

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ABOUT HOT-HOUSES FOR GRAPES.

I am about building a hot-house for the culture of grapes, principally, but being a novice at the business, need some reliable advice as to the structure, &c. I had contemplated building one 16 by 40 feet, and 8 feet high at side. What would be the best mode of building one of those dimensions? What sized glass, and if the glass should lap or be matched? If the north side is much exposed, should it be built of stone? Also what is the best mode of heating, and to what temperature should the enclosed surface be lowered? Also, any other advice that is necesssary. If you have any work on the culture of grapes, please state the price and name, and I will send for one. B. S. A——EE.

Providence, 1858.

REMARKS.—Perhaps Mr. Bull, of Concord, will give our correspondent some hints in the matter. Chorlton's "Grape Grower's Guide," price 60 cts., and Allen's "Treatise on the Grape," price $1,25, are excellent works. Leuchars on the "Construction and Management of Hot-houses" is more elaborate, but is invaluable to one who desires to construct a hot-house of any size.

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LIME AND MUCK COMPOST.

1. What length of time should a compost of lime and peat mud or salt mud be mixed to make it suitable to apply to the soil for a crop?

2. What proportion of lime should be used with the mud?

3. Which is best, the shell lime or common lime?

4. Should it be water slaked or air slaked?

5. Should it be thoroughly pulverized and mixed, or can a laying of mud, five, six or eight inches thick be put down, and then a sprinkling of lime be used? A. D. M.

Hyannis, Jan., 1858.

REMARKS.—1. A compost bed of muck and lime may be safely used in one week after it has been thoroughly mingled; but it would be riper and better if suffered to lay a longer time.

2. On clayey lands five or six bushels of lime to a cord of muck would not be too much, but on common loams one or two bushels will answer very well.

3. It is said that shell lime, when well burned, is stronger than stone lime.

4. The lime should be water slaked, because in this condition it is quite soluble, but is very slowly so after it has been exposed to the atmosphere and become like chalk.

5. Prepare the compost heap in layers, and after it has remained so for several days, or weeks, according to the time when it is wanted for use, overhaul the whole by cutting down perpendicularly through it, and pulverize and mix it thoroughly. It is then ready to be applied to the soil.

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BOARDS OF AGRICULTURE.

I perceive by the journals that come to hand, that organizations of this character are now in full tide of successful experiment in Maine, New Hampshire, Massachusetts, New York, &c. I know of no modern improvement better fitted for the instruction of the people, than the proper organizations and management of farmers' clubs. I am pleased to see our own Gov. Banks taking hold of the plow at the first Legislative meeting of farmers, and promising his co-operating aid. What better thing can he do? Are not three-fourths of all his constituents directly dependent on the culture of the soil for their living and their happiness? As the head of the farmers' club, the Governor has one of the best fields for honorable and useful labor. ESSEX.

January 28, 1858.

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A LUSUS NATURÆ.

MR. BROWN:—Mr. Albert Claflin, of this town, had a cow whose time expired to calve on the 8th of April last; the calf did not make its appearance. He milked her a short time and turned her out to grass. In December, (eight months after,) he butchered her and found the calf in a perfect state of preservation, enclosed in a hard, dark substance. It is something new to me, having never heard or seen anything of the kind before. S. D. DAVENPORT.

Hopkinton, Jan. 11, 1858.

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A FINE HEIFER CALF.

DANIEL KNOWLES, of Newton, raised last season a heifer calf which at six months and ten days old weighed 510 lbs.; of native breed. M.

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To "E. H.," *Rutland, Mass.*—It is impossible for us to give you any suggestion of value in relation to your cow, from the symptoms you describe. The difficulty is probably local and temporary, and will yield to the ordinary remedies of mild cathartics or injections.

☞ The Children's Mission Society of this city will send out another delegation of children to the West about the first of April next. An agent of the Society will attend them, and procure suitable homes.

For the New England Farmer.

SUCCESS—FARMERS' CLUBS.

MR, EDITOR:—In order to succeed in any thing, one must love it, and give it all the energy of his nature. If he does this, and is blessed with ordinary health, he will be successful—he cannot help it; this is according to the law of cause and effect.

Now permit me to say a few words to those farmers who are continually complaining of the want of success. Before giving utterance to these complaints, would it not be well for such to take an account of stock, investigate the operations of the farm in all its departments, in doors and out, and see if there has not been a lack of knowledge, common sense, enterprise, skill; some one or all these, which might have been easily acquired or obtained from some good agricultural paper, or, perhaps, by a simple inquiry of neighbor Thrifty.

Those operations which go by the name of *luck*, do not come half so often by "chance," as most people imagine. Whenever you find a person remarkably successful in any undertaking, whether it be as the mechanic, merchant, or farmer, you will find upon close investigation, that luck, as generally understood, has had very little to do with his success, though I would by no means deny that in some instances, favorable circumstances have helped produce the grand result. Much more frequently, however, it will be found, that such a person has a thorough knowledge of his business; he knows how to do what he wants done, and when; and it is done at the proper time, and in the right way. You will find him thoroughly posted up in his business, and that he avails himself of all those opportunities which present themselves to accomplish what he wishes, just in time to succeed! No matter what these may be, provided they are honest, he brings them to bear upon the grand issue. If there is a new implement, which will do his work better, faster and cheaper, than any he has, he gets it. He employs good help, improves his stock, renovates his pastures, increases his manure heap from the resources of his own farm, plants the best seeds, &c. &c., and success comes as surely as water will run down hill. Is there any *luck* in all this? Why, my dear man, open your eyes, and read the papers, and you will soon be convinced to the contrary. What such a successful farmer *has* done, another *may* do; one success brings another, and plenty of means with it. *Cash*, if you please, is the result of such a course. All the elements of this success are within the reach of nearly every farmer in New England. There can be no mistake in this, but it never will be obtained by those who rest satisfied by doing as the "fathers have done," or who are not wakeful to the spirit of the day, and goes boldly to the work.

Thus far, I have written altogether differently from what my intention was when I took my pen, which was—to say a few words in regard to *Farmers' Clubs*. I have noticed this subject mentioned in quite a number of the newspapers of late, aside from those devoted to agriculture, proving the importance attached to their meetings by those who are supposed to be acquainted with what the times demand, and the best interest of the farming community. Where these meetings have been in operation a single year, I will venture to affirm, you will find more intelligent farmers, better cultivated farms, and more successful operations connected therewith, all things being square, than will be found where none of these social gatherings, (for they should be truly such,) have been instituted. In this, there is not a shadow of a doubt. The sum of human knowledge is diversified, and no one man can know every thing, however small; but when all these "*littles*" are put together, the sum total is astonishing. Just so in farming: when all the "mites" are put together, the aggregate is large, and it should be the object of the farmer to gather up these, that nothing be lost. If I were a farmer, and there was nothing of the kind in operation in my neighborhood, I would not rest a single day, without some effort to establish a Farmers' Club, feeling assured, that I should be more amply paid than dollars and cents could do. The advantages to be derived from these meetings will suggest themselves to every thinking man; they are numerous, and directly to the interest of those who engage in them. I am informed by a gentleman who knows whereof he speaks, that good, great good, and nothing but good, has been the result in every place where these Clubs have been formed and sustained for a single winter. Meetings for professional improvement are held by ministers, doctors, &c.; why not by the professional agriculturist, the foundation and prosperity of all human enterprise. The old-fashioned system of "sleep in the corner" must be abandoned, and that of "young America" introduced. Now, farmers, is the time; the long evenings are upon us, do not let another week go by, without an effort for the formation of such a Club in your neighborhood. A text,—No matter how dull the instrument, grinding, on a good stone, if persevered in, will bring it to an edge.

KING OAK HILL.

December, 1857.

BEST THING FOR BURNS.

It may be put down as a settled fact that the very best application for all kinds of burns and scalds is an immediate application of dry *wheat flour*. It is without controversy better than any and all of the "healing salves," turpentines, oils, "pain-killers," &c., that can be named. We speak positively on this point, because it is one decided by the best physicians, and we have had abundant practical proofs of its efficacy.

Heat disorganizes the flesh, deadens the cuticle or outer skin and admits air which is irritating. A good coating of flour shuts out the air, soothes the irritation, and dries up the fluids thrown out. Do not imagine that "something healing" must be applied. Not all the salves in the world can mend broken flesh. You can stick together broken glass, or wood, with wax or glue. You can weld together severed iron, but no such treatment is applicable to flesh disorganized, cut or burned away. Nature, so to speak, has a way of her own, and only one way to repair a breach in the flesh. *The healing material comes from within.* If the hand be cut, bring the severed parts together, hold them there steadily, cover up the part from the air and from external injury and the healing will go on so long as there is no

disturbance. If from curiosity, or anxiety, or other cause you disturb the half-formed new flesh, a sore will be the consequence.

We, repeat, for all kinds of burns or scalds, however severe, put on *only* a thick coat of flour. If a hard crusty mass be formed so as to produce irritation, after a day or two wash off the surface carefully with blood-warm water, dry partially, and put on more flour, but never disturb the actual surface of the sore until, when entirely healed, the scab falls off of its own accord. Our word for it, this treatment will best promote the cure of burns. But a short time since a child upset a dish of boiling water into its bosom, producing a fearful scald upon the whole front of its body. The mother chanced to be a reader of the *Agriculturist*, and noted our remarks on this topic some two years ago. She immediately applied flour, and flour only, binding it on with a cloth loosely so as not to produce irritation.—The child was soon soothed, and in a very few weeks was entirely healed, with scarcely a scar remaining. This is but one of many similar instances that have come to our knowledge from time to time.—*Amer. Agriculturist.*

LETTER FROM MR. BROWN.

Washington, Jan. 15, 1858.

MY DEAR SIR:—I left Boston at 3 o'clock on Monday in the midst of a drenching rain, and arrived in New York at midnight. During much of the way the rain fell in torrents, so that the track in some places was covered with water. There was no snow beyond New York. After leaving Philadelphia, I observed men engaged in farm work, such as removing stones, ditching, &c. The weather is more like that of a day during the Indian Summer, or one of those soft, balmy days that sometimes come like a good angel in the last of March. In *twenty-eight* hours from the time of leaving Boston I reached Washington, and during that time enjoyed five hours of quiet sleep at New York. There certainly was a contrast between this and my first visit to the federal city, when about *eight days* were occupied, and they were days of hard work and fatigue. This difference is merely the result of *science*, that man-helper, which some persons affect so heartily to condemn. That science, or head-work, I confess, has been abundantly aided by hand-work, but the latter only follows the former.

Yesterday I attended the first session of the *annual meeting of the U. S. Agricultural Society.* It took place at the Smithsonian Institution, and was attended by gentlemen representing twenty-one States and two territories. President WILDER pronounced his annual address to the Society, congratulating it on its continued progress and success, and peremptorily declined a re-election. It touched on the important transactions of the Society during the last year, and made a feeling illusion to the removal by death of two prominent and valued officers, Vice President THOMAS J. RUSK, of Texas, and G. W. PARKE CUSTIS, of Virginia. He concluded with a brief review of the valuable influences on national and social advancement excited by the Association, and an enthusiastic exhortation to its members to "carry forward its objects, till from East to West, from North to South, our country, our *whole* country, shall rejoice in the triumph of perfected husbandry, in the blessings of universal peace and prosperity;"

> "Till plenty, rising from the encouraged plow,
> Shall fill, enrich, adorn our happy land."

After the adoption of several resolutions in furtherance of business, Judge FRENCH, Vice President of the Society from N. H., was invited to address the meeting upon agricultural affairs in England, as he had observed them during his late visit to that country. He promptly honored the call, and spoke eloquently, for nearly an hour, upon the subject of *steam plows;* he stated that he saw abroad three different steam plows in operation, and was of the opinion that in *large* tracts of land they will become available, by doing a great amount of work in a short time, and thus, in effect, lengthening the season and giving crops a better opportunity to mature. His remarks elicited many inquiries, and seemed to wake a lively interest in the subject. In the plowing he witnessed, the work was well done at the rate of an acre an hour. Mr. JOHNSON, Secretary of the New York State Agricultural Society, Mr. BYINGTON, M. C. from Iowa, and others, engaged in the discussion.

Dr. ANTISEL, of this city, then read a paper upon *"the necessity of having a more perfect knowledge of the mineral necessities of our crops developed."* He brought to the notice of the society some observations regarding the proper application of chemistry to agriculture, remarking that the last fifteen or eighteen years had opened to us varying views of the value of chemical science. I cannot now even give you the leading topics of his learned paper, but was glad to find a scientific man condemning the theory that a common five dollar analysis of the soil is of importance to the farmer. That delusion has had its day, I hope never to be revived. I have been informed by one of the ablest chemists of the country, that a thorough analysis of any soil could not be made at a less cost than twenty dollars to the chemist himself! What, then, should be the judgment pronounced upon those who have advocated these analyses at one-fourth the cost of a genuine investigation, and thus impose upon a confiding and credulous people?

After the reading of this paper, Dr. LORING, of Salem, Mass., addressed the meeting in feeling and eloquent terms in reference to the loss of its

two members, Messrs. Rusk and Custis, and offered two resolutions, which were adopted, and then the society adjourned until to-morrow at nine o'clock.

SECOND DAY'S SESSION.

The business to-day has been the election of officers, and a long discussion upon the subject of the *Chinese Sugar Cane*. Mr. TENCH TILGHMAN, of Baltimore, was elected President; B. B. FRENCH, of Washington, Treasurer; and BENJ. PERLEY POOR, of Massachusetts, Secretary. The Vice Presidents of the Society remain generally as they were last year. The discussion on the sugar cane and its products was harmonious and interesting. Dr. LORING, of your State, took an active part in it, and although I did not entirely agree with his views, am happy to say that he distinguished himself as a ready tactician and a fluent and agreeable debater, and left an impression of what he may do at some future time, perhaps, in another sphere in the federal city. Another session of the society is to be holden to-morrow.

The weather is soft and delicious; the fashion and beauty of our broad country seems to have concentrated here, in spite of all disasters, either financial or commercial. The Court side of the Avenue is thronged, and, what is wonderful, age is elastic and fresh again; the lame halt no more, the blind see, the disconsolate rejoice and are glad, while each one seems to outvie the other in an effort to show that *time* and *care* and *sorrow* have never touched *them*, and that they mean always to bloom in perennial freshness and youth! Some general topics I must touch in another letter. Truly yours, SIMON BROWN.

Joel Nourse, Esq.

MEADOW LAND—MANURE.

The best dressing for meadow land is ashes and bone-dust; and if it is dry and gravelly, a top dressing of marl muck is first rate. The muck should be dry, and placed in heaps in the fall, and left to be decomposed for the frosts of winter. Leached ashes, marl and mud are all first rate for gravelly land. When farmers know that 110 lbs. of leached ashes furnish as much phosphate as 507 lbs. of the richest manure, they will stop selling their ashes, and apply them to their land. If old bones can be procured, a mixture of four bushels of ashes to one of bone dust is better than either separate. Land producing one ton per acre, has, by this application, been made to produce three tons. Mud and ashes are also a good mixture, in the proportion of six or eight bushels to the cord of mud. If leached ashes are used, the proportion should be about one of ashes to three of mud. For this mixture the mud should be dry, and placed in heaps in the fall.

For clover meadow, plaster or gypsum is perhaps the best top-dressing. The ashes of an acre of red clover contains no less than three bushels of gypsum. This shows that its presence in the earth is necessary to the growth of clover. A bushel or two to the acre will often double the crop, and add more than twenty times its own weight to it. Four pounds of gypsum will produce one pound of nitrogen, and every pound of nitrogen increases the crop a hundred pounds; provided, always, the land is suited for clover and plaster.

The value of manure depends on the amount of nitrogen it contains; and plaster fixes it and detains this gas, which would otherwise escape into the atmosphere, and give it out for the use of the plants, when wanted. The plaster is not the manure, but a receptable to hold the manure arising from the decomposition of animal and vegetable matter.—*Ohio Farmer.*

For the New England Farmer.

YOUNG MEN AND THE FARM.

MR. EDITOR:—While looking over your number of Nov. 21st, my attention was arrested by a rejoinder to an article on the aforesaid subject, which was written by me, and published in your paper, issued Oct. 30, vol. 12, No. 44. This "Farmer's Son," who wishes to "propound a few questions to the author of the above article referred to," could not have cast his lines in more acceptable places, as it is quite agreeable to me to answer his propositions.

I am first asked, "would you advise one to remain on the old 'old farm,' and with the 'old man' to cultivate the productive vineyard of God, which he gave to us for an inheritance?" If you *can* remain with your father, without any inconvenience to either party, *do so*. If I ask you what the chief aim of man is by *nature*, and the chief *end*, also, you will at once say happiness. Then, where can you better find this appropriate stimulus, than with your father and mother, and that "bonnie lassie," as it seems to be a matter of fact in your case? Where will you take more comfort than in your old home, with her whom you love? It is not to be expected that a large family of children, both boys and girls, are to "get married" and "settle down" on "father's farm." I did not mean to convey any such idea. I admit, that women are obliged to toil "year in and year out." This ought not to be so. It is the duty of every man to alleviate the labors of the opposite sex. "There is a fine colt in the stable, I must take care of it or I shall not get my $200." "I have a pair of steers in the barn, also, and I must take extra care of them, or I shall surely lose the first premium;" and thus with all that he has of *property*. But, is there occasionally one word said about the wife, mother, daughter, or of the household affairs? *Men* are to blame about these things. Do they, as often as they should, "fill the wood box," bring the water, and relieve them of thousands of "lifts," when they can as well as not? Perhaps this coming cold weather you will sit "behind the stove," your wife will say, "John, please help to lift this large kettle into the sink." "O, dear, I must go and card the 'colt!'" Why, how hard your wife tries to get that kettle up; finally she has a pain in the side, but you exclaim, "she'll get over it to-morrow." Is it any wonder that your young and

pretty wife languishes, and finally dies, from too much care and labor?

You wish to know if I would advise one to remain upon a farm where household duties tax the female strength beyond its powers of endurance? *No!* unless you are able yourself to alleviate them of their taxation, and make your home to "bud and blossom as the rose," as it will be your duty to do, wherever you do locate. If it is impossible to remain upon the old farm, and with the "old man," *remain on some farm.* Perhaps you have more *"moments,"* and better *"means"* for study on the farm than you would have in many sedentary occupations. You have a lifetime before you, and if you are on the farm you have *hours* and *days* that you might occupy, which, perhaps, are devoted to pleasure or idleness.

Young men generally wish to be something that they cannot. They want to get a *"finished* education," in a very short period; they want to get married before the "colt" is old enough to drive, they want to get rich, and be elected to Congress, before they leave the common district school. In fact, in the present age, they are born, live, and die, in a hurry. They cannot wait for nature's developments.

You have difficulties, no doubt, and so have I, and so has each one of us. Perhaps you and I have much more serious obstacles to overcome than do many others.

In conclusion, I must say, that the *farm* is the place, in general, for youth; and for the *"old man,"* if possible. F. V. POWERS.

Waterford, Vt.

For the New England Farmer.

VEGETATION IN CALIFORNIA.

I see many accounts of the enormous size of vegetables grown in California, which would seem almost incredible were they not authenticated by many witnesses beyond all doubt. A few specimens may be given for comparison with the same species raised in this region.

At a meeting of the Farmer's Club at the rooms of the American Institute, New York, several years since, two gentlemen who had recently returned, made some statements in regard to the size of vegetables grown there; for instance, an onion weighing twenty-one pounds; a turnip one hundred pounds; a beet sixty-three; carrot, forty; a cabbage, seven feet in circumference, weight fifty-six pounds; and bunches of grapes weighing from seven to ten pounds each. These, it is true, are extraordinary specimens, but the average size of vegetables far exceeds any thing of the kind with which we are acquainted in this section. Every one is familiar with the description of the groves of gigantic trees found there, in comparison with which our largest ones are mere walking sticks; one called the "father pine," which is dead and fallen, measures four hundred feet in length, and one hundred and ten in circumference; two hundred and fifty feet from the roots it is twelve feet in diameter!

There appears to be something peculiar to the soil or climate of California which favors this enormous growth of vegetation. An analysis of the soil would, perhaps, reveal the secret; some powerful fertilizer might be discovered beneath the surface which produces these astonishing results. We have as rich soil in the Mississippi Valley as can be found in the known world; the climate is also genial, and in some parts of it, very warm, yet we have here none of these monstrous vegetables products which will compare with the above-mentioned. We have gardens in the vicinity of our Atlantic cities where all kinds of fertilizers are employed, and the soil rendered as rich as possible, yet vegetables never attain these enormous proportions. It appears desirable to ascertain the cause of the extraordinary growth of plants on the Pacific slope, and it is hoped some one competent to investigate the subject will enlighten the public in regard to it.

Leominster, Mass., 1858. O. V. HILL.

For the New England Farmer.

ORANGE COUNTY, N. Y., AND ITS PRODUCTS.

MR. EDITOR:—Yet among the Yorkers, (Dec. 23d,) I will again pick up the pen to put a few thoughts on paper, for your use or disposal. In the midst of so many circumstances, both new and novel, time has hurried along at an alarming rate; and I look with surprise at certain symptoms of the very near dying-day of our valuable friend, the year 1857. With farmers and their families, the seasons are more closely observed, in their changes, than with other portions of our common family. With them, festive seasons come naturally, and each opening season is a new play opened; sometimes somewhat tragic; never greatly comic; always, rightly received, interesting and instructive.

About a mile to the southwest of where I am now writing, stands a large, white farm-house, occupied by a Mr. Strong; where the grandfather of the present occupant, "Capt. Strong," was murdered by a band of Tories in time of the Revolution. Capt. Strong was an active advocate of the colonial cause; and for this was murdered in his own house. The one who, among the band of Tories, was the positive slayer of Capt. Strong, was a man by the name of Smith. From all I can learn I suppose he was one of a noted band of infidels and outlaws, who had their head-quarters near the Hudson, and rejoiced in acts of blasphemy, licentiousness and crime. He, with others of the same sort, came to a short corner in their career, by being legally elected to "stretch hemp" from a scaffold; which office they were obliged to fill. This was their reformation, if they ever experienced any. We rejoice not at the doom of the dead; but it is lawful to rejoice for the safety and peace which is secured to the living.

The farmers in this region are mostly what we Yankees would be inclined to call *large farmers.* It seems to be no great wonder for a man to have six or seven hundred acres of land. There are some small farms. The population is by no means dense, although it is more so along the line of railroads.

The people are mostly church-goers, and even their horses want to "go to meeting." A circumstance was told me a day or two since, of an aged man by the name of Decker,—who had long been a constant attendant at the Presbyterian church of Blooming Grove,—and his horse. Mr. Decker became old, and being too unwell to attend church

for several Sabbaths—the distance being three or four miles—his carriage horse became dissatisfied, and on Sunday morning, when people were going in various directions to their various meetings, he jumped out of the pasture and sped away to church, took his place beside the post where he had usually been tied, and waited until the close of service; when he turned his attention homeward, going directly like a serious-minded horse, well aware of the importance of observing the Sabbath. It wouldn't be a bad idea to have that old horse commissioned to preach to some people.

In one of the towns of this county, some years ago, "as history relates," the dogs of a certain community became so great church-goers that the minister found proper occasion to suggest to his parishioners that if the people would learn from the example of their dogs he should have many more attendants upon his ministry. Men of wisdom may learn lessons from poor puppies.

I have taken some pains, since writing my last, to ascertain, as definitely as possible, about the products of milk and butter. At a station on the branch railroad, running from Chester to Newburg, and connecting at the former place with the Erie railroad, I learned that about 2000 gallons of milk were sent daily to New York. This was said to come from the farms included in about six square miles of territory, that is, along the road perhaps three miles, and extending back from the road about a mile on each side. This would give to the farmers, at three cents per quart, the sum of sixty dollars per diem, for milk alone. This winter product bears no comparison to the amount produced in summer. The summer crop sells at a lower figure than that of winter, but not a less profitable. It is easy estimating the income from milk, to a town of six miles square, supposing $60 a day to describe that of six square miles. The daily income of the town would be $360, for milk alone. Its yearly income for the same would be no less than $130,400.

The milk-sales do not take away the floods of milk, by any manner of means. Butter-making is generally considered more profitable, and those who sell milk also make immense qualities of butter. The fair product of a good butter making cow is about two firkins, say 168 pounds.—Some extra dairies make three firkins, or about 250 pounds. But this last is too high to found any estimate upon. At 168 pounds, as they have sold their butter for several years past at 25 cents per pound, a cow gives $42 worth of butter.—What is said to be an average product of butter, per cow, is about 150 pounds per year. The additional credit to the cow is for the buttermilk, for feeding hogs, the calf and the manure for the land. Some high farmers estimate the proceeds of their cows at $65 per year, each. Upon some of the large farms, from fifty to near one hundred cows are kept.

In making butter, they churn daily, sometimes twice a day, some by horse-power, some by dog-power, some by sheep-power and a few by water-power. It is done with a dash churn; the size of churn said to secure most butter from cream being of about 24 gallons. Larger churns are not thought to gather the butter so well.

When the butter is gathered, it is taken from the churn and worked over, to get out the buttermilk. Then it is washed. Some pure cold water is applied to it, perhaps a quart to five pounds, and immediately worked through it, to remove what remains of buttermilk. It is then salted, packed down solid in the firkin, which, when full, is covered with a prepared brine, to exclude the air and keep it sweet.

The butter made in October is here generally preferred. Some prefer that made in May.

I would say something further about the habits of farming here, but I am admonished by the length of this letter, that I shall surely fail of that virtue of good sermonizers and scrap-writers, *brevity*. So I will not attempt to tell how dogs, sheep and horses handle a dash-churn. C.

Orange Co., N. Y., Dec. 23, 1857.

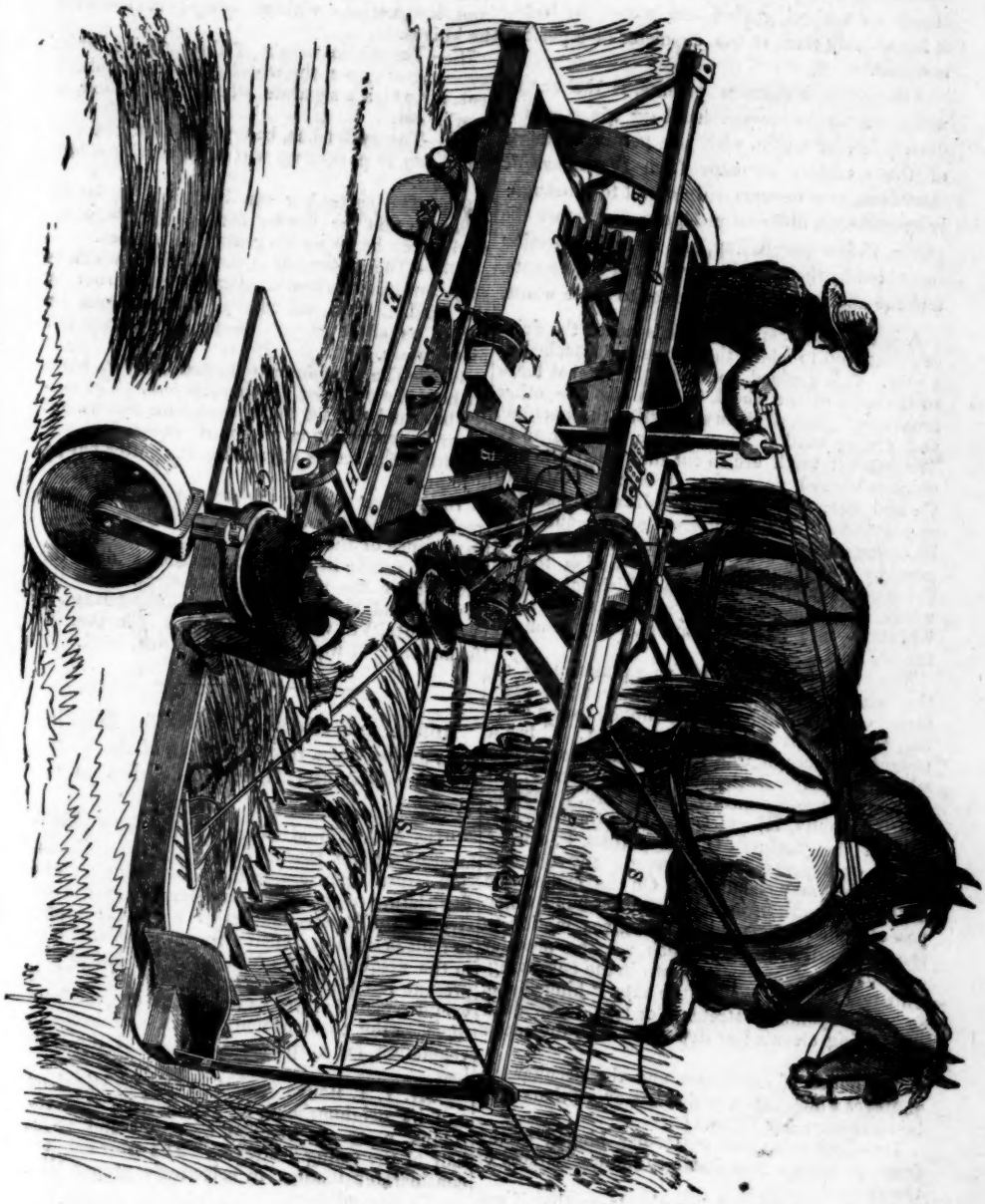
A THOUGHT FOR YOUNG MEN.

More may be learned by devoting a few moments daily to reading, than is commonly supposed. Five pages may be read in fifteen minutes; at which rate one may peruse twenty-six volumes of two hundred pages each in a year. You say you have none to guide you. The best scholars and men of science will tell you that by far the most valuable part of their education is that which they have given themselves. Volumes have been filled with the auto-biography of self-taught men. Think of Franklin, the printer, of Linne, the shoemaker, of John Hunter, the cabinet-maker, of Herschel, the musician, of Dolland the weaver, of Turner, the printer, of Burritt, the blacksmith. Love learning and you will be learned. When there is a will there will be a way.

Begin at once, take time by the forelock, and remember that it is only the first step that costs. and having begun, resolve to learn something every day. Strike the blow, and avoid the weakness of those who spend half of life in thinking what they shall do next. Always have a volume near you, which you may catch up at such odd minutes as are your own. It is incredible, until trial has been made, how much real knowledge may be acquired in these broken fragments of time, which are like the dust of gold and diamonds.—*Dr. Alexander.*

SAVING CABBAGES.

The best way to preserve cabbages green all winter, so that their good qualities shall in no manner deteriorate, is as follows: As late this month as the weather will allow, *dig out* your cabbages that you have set apart for winter use—dig trenches say eighteen or twenty inches apart, and from twelve to twenty feet in length, as may be most convenient, and in accordance with the quantity to be preserved,—*transplant* your cabbages firmly in these trenches, as closely as they will stand together. When your bed is finished, raise a platform some eighteen or twenty inches high over them, which can be made of any refuse posts, rails or boards about a place; across this place a few bean poles or lath, and upon the whole throw a quantity of bean haulm, cornstalks, straw or any other material of this kind, as a protection against wet and frost—and you can eat green cabbage up to April, finer than if plucked from the garden in October.—*Ger. Tel.*



VERMONT MOWER AND REAPER.

[SEE PAGE 113.]

In no one agricultural implement has more progress been manifested than in the harvester; from being a very rude combination of a pair of shears on a wheel, guided and moved by hand, it has quickly risen to the character of a perfect machine.

Among the numerous patents, is the one to which the above named has been given, and a description of which, with the points of merit of the machine, we copy from the *Scientific American*. Our farmers will do well to thoroughly examine the different machines now before the public, before purchasing, and in their selection be guided by their own knowledge of their wants, and the adaptation of the mower to those wants.

A is the platform, on which is raised the driver's seat, and to which the horses are attached to a pole. B is a wheel, connected by ratchet teeth to the axle of the wheel, C, as is also the other large wheel, both of them supporting the machine, and giving motion when drawn forward, to C. The ratchet teeth are so cut that when the machine is backed, no motion is communicated to C; and when it is desirable to draw the harvester anywhere, and the cutters are not required to be operated, the ratchets can be thrown out of gear by the lever, N. C gives motion to the bevel gear under the platform, which rotates the wheel, D, and consequently gives the necessary vibratory motion to the cutters, F, by means of the shaft, E.

The cutters are mounted on a platform, G, on the back of which is the raker's seat, the platform being well and strongly hinged to the casting, H, which is firmly secured to A. G has a tongue, or piece of iron I, projecting from it, on which the screw in the end of the lever, J, can exert pressure, by means of the cord, *j*, passing over the pully, K, and worked by the lever, M, so that the platform, G, and cutters, F, can be raised or depressed to overcome any obstacle which they may encounter. On the end of one of the wheels, B, is a small pully, *r*, around which passes the endless band, *q*, that gives motion to the reel, S, the arms of which are the peculiar and advantageous shape shown in the engraving. This reel revolves around the axle, P hinged at *o*, to a corresponding stretcher or tyer, O, to allow of it being elevated or depressed with the cutter platform.

The points of excellence and the peculiar advantages which this machine has over others may be enumerated as follows:

1st—In having the cutter-bar hinged to the frame so as to adjust itself to the unevenness of the ground.

2d—Having two driving wheels, so that if one slips the other will take the load.

3d—When the machine is moved to the right or left the knives are kept in motion by one or the other of the driving wheels.

4th—The motion of the cutters is stopped by the driver taking hold of the lever N, (as represented in the cut) which is attached to the clutch on the main shaft. During the process the gearing remains unmoved.

5th—The whole weight of the machine is on the wheels where it is required to give power to the stroke of the knives.

6th—When the machine is backed the knives cease to vibrate, consequently you back away from obstructions without danger of breaking the knives.

7th—The whole weight of the machine, while reaping, rests upon the wheels, except the raker's seat, for which a separate wheel is provided, as seen in cut.

8th—The cutter-bar, being hinged to the machine, can be packed up without removing a bolt or screw.

9th—The cutter-bar can be raised 18 or 20 inches so that the farmer can gather his grass-seed before he mows his grass if he choses.

10th—The cutter-bar is easily raised, which is very convenient when coming to the corner of the land. When raised, the machine can be turned as short as you please, or go over the mown grass.

11th—The machine is operated in all its parts without the operator leaving his seat. The cutter-bar can be raised and the machine thrown out of or in gear while in motion if required.

12th—The reel is adjusted to the cutter-bar by a joint.

13th—Bent slats on the reel for the purpose of reeling in the grain at the ends of the cutter-bar in advance of the rest.

There can be little doubt that this is one of the best among the numerous harvesters. It is the invention of Hosea Willard and Robert Ross, of Vergennes, Vt., who will furnish any further information. It was patented Nov. 8th, 1857.

ROBINS AND CROWS.—We cut the following from a report of a recent meeting of the Boston Society of Natural History, published in the *Traveller:*

"Dr. A. A. Gould observed that at a recent meeting of the Horticultural Society, a discussion arose upon a question of petitioning the Legislature to repeal the law concerning the destruction of robins and other birds, the injury to fruit being so extensive from their abundance in the neighborhood of Boston. He hoped the present law preventing the destruction of birds would remain in force, as the benefit derived from them, in the consumption of insects injurious to vegetation, far surpasses the value of the fruit lost.

"Mr. T. T. Bouve remarked that, in Hingham and its neighborhood, he had noticed that the robins' nests are invaded by crows and about half of the young destroyed. The crow exhibits considerable instinct in selecting a proper time for the depredation.

"Rev. Theodore Parker inquired if it had been noticed that the crow mates in families of three, generally one male and two females, an arrangement by which the duties of obtaining food and watching its young are better performed than by pairs. This he had observed, but he could find no notice of it in works on ornithology."

LINES FOR THE NEW YEAR.

It gives us much pleasure to publish the following very pleasant epistle from our friends, the publishers of "Webster's Unabridged Dictionary." The beautiful language in which the succession of the seasons is described, the picture of the farmer's winter fireside, and the peace and plenty which he shares after his season of labor, will commend it to our readers. We hope also, that the precept inculcated in the closing lines will be pondered upon, and the example followed by all who read these lines.

MR. FARMER:—

He of the foretop and the glass,
And swinging scythe, (how like the grass
Flung to the swath, though rank and tall,
Before his strokes we mortals fall!)
Again has passed his annual track
Along the changing zodiac,
From where his race he first began,
At old Aquarius with his can,
Still swift careering through the sky,
Past "Aries, Taurus, Gemini,"
Till, bearded Capricornus won,
The goal is gained, the circuit done.

First came the bright and gladsome Spring,
Rejoiced o'er hill and dale to fling
Her robe of green. Along her path,
Scarred by the storm-king in his wrath,
But now, as sprang the fragrant flowers,
Like Eden bloomed this world of ours.
Forth from his wintry hybernation
Comes man, "the lord of the creation,"
And "jocund drives his team afield,"—
The ripened sheaves his lands shall yield
Assured shall meet the waiting flail;—
"Seed-time and harvest shall not fail,"
The pledge, through time for aye t'endure,
The bow-sealed covenant makes sure,—
And on he guides the shining share,
Content, to win, the toil to share.

Then Summer, nymph of healthiest hue,
Came next, and o'er the landscape threw
Her heightening charm. From his bright throne
"With light and heat refulgent" shone
The glorious sun; at his broad blaze,
As down he pours his noontide rays,
Their herbage-cropping labor stayed,
The panting flocks seek the cool shade.
His scythe the stalwart mower swings
With vigorous arm; or out there rings
Right cheerily the music made
As with swift stroke he whets his blade.
Hard by, perched on some swaying bough,
The bobolink is singing now,
And fills the air with varying note,
As joy distends his tuneful throat.

Autumn succeeds,—a nut-brown maid;—
The garland fair that crowns her head
Of fruits and flowers together blent,
Her comrades, Peace and sweet Content.
The tiller from his burdened fields
Garners the full increase which yields
Still to her sons the generous soil,
And well repays their trusting toil.
The forest dons its bright array,
Like Joseph's coat in colors gay,
And soon the "sere and yellow leaf,"
Emblem of man's existence brief,
Reminds us, in our pathway found,
That Nature's course has run its round.
The joyous-birds of summer-time
Have sped them to some sunnier clime,
And now from out the upper sky,
While on in serried files they fly,
Honk! honk! comes down the wild-goose strain,
And still in one unchanged refrain,
As on from farthest Labrador,
They hast to seek the Antarctic shore.

Winter once more—an old man bowed,—
The winds without are piping loud,—
His locks are streaming in the blast;
The sky with stormy clouds o'ercast;
The streams congeal beneath his breath;
Life yields to torpor or to death;
And Earth, by snowy mantle prest,
Enjoys again its Sabbath rest.
And now, beside his evening hearth,
Such joys as only take their birth
From man's primeval occupation,
The farmer shares, and compensation
For summer's toil in winter's rest,
And garnered stores in peace possest.
The household band are grouped around,
In varied occupation found;—
One swiftly plies the "threaded steel"—
One caters for the morning meal,—
The manly boy, he who but now
Tedded the swath, or steered the plow,
To some school problem bends his brain,
Or, gallant, holds the tangled skein
For the fair hands that well, we trow,
Could weave a web should catch—a beau.
Full at his ease there, too, the sire.
"The kine are snug within the byre,"
Broadhorn, and Buck, and Dapple-Grey,—
Well-filled the crib, well-stored the bay,—
Before him lies his weekly sheet,—
From out his "loop-hole of retreat,"
Through this, ("*The Farmer*," 'tis, of course,)
He scans the world; its Babel hoarse
Comes, distance-mellowed, like the roar
Of far-off waves that strike the shore.
Here learns he of the "great commotion"
That moves men's minds, as tides the ocean,
Of fillibustering marauders,
Who live by rapine and disorders,—
Of stocks, defaulters, "bulls" and "bears,"
And all the turmoil of affairs,—
Panics, expansion and contraction,
Changes that drive men to distraction,
And thanks kind Heaven, in language graphic,
His not the lot of trade and traffic.
Yet not from care exempt *his* lot,
(For whoso lives and suffereth not?)
And, nature-taught, knows he full well,
The frost that withers, opes the shell.
The sturdy steer across the new-shorn plain,
Yoked with his mate, drags slow the weary wain,
Nor knows he draws behind the precious load,
Whence the same hand that pushes now the goad,
When the storm beats, and wintry winds are chill,
With thoughtful care his daily crib shall fill.

* * * * *

Not blest as his is our employ,
Though once were we "the farmer's boy,"
And still each glad association
Turns to his honored avocation;
And so, to mitigate our grief,
Comes your hebdomedal relief:—
We *read* of brooks and running rills,
Corn-covered valleys, herd-crowned hills,
Of broods and breeds, root-crops and cereals,
Of Marrowfats, and Blue Imperials,—
Of reapers, red-top, and rotation,
Subsoiling, draining, irrigation,—
Of furrowed fields, and waving grain,
And boyhood's scenes are lived again.

As needs the axle lubrication,
That wheel, unfrictioned, have rotation;—
"As money makes the mare to go,"
And every *quid* should have its *quo*;—
As he that grinds should take his toll,—
The ox that treads, ungrudged his dole,—
And debts of gratitude be paid
At least in sound "material aid,"—
Please find enclosed in current bills
That which your requisition fills,
And, as without, were incomplete
Our joy, still send your welcome sheet;—
"Long may it wave,"—the tiller bless,
And still its shadow ne'er be less;
And unborn farmers, through the ages
Like us, be gladdened by its pages.
—Let "Uncle Sam" be prompt to carry 'em,—
Yours to command, G. & C. MERRIAM.

Springfield, January, 1858.

For the New England Farmer.

SUBSTITUTE FOR DEAR SUGAR.

The unprecedented prices of saccharine products have recently turned the attention of "Jonathan" to the subject, to see if there is no substitute to gratify his "sweet tooth," because he has been so long accustomed to this daily luxury, that it is out of the question to expect him to do without entirely, should the article again go up to even higher figures.

The maple of our norhern forests was put in requisition the past spring, and millions of pounds of sugar from the trees, have taken the place of the southern article. Even if a full supply could be obtained from this source, it could never compete successfully with the cane. Land kept in trees expressly for sugar, is worth many dollars an acre, and the annual taxes and interest are not always a trifle. The fuel used in evaporation, together with the labor attending it, will always prevent competition with cane, except when sugar is held at high prices. Another substitute for the southern cane is now offered in the sorgho, which, from recent experiments, promises a supply much below present prices. But even if it is produced at the lowest possible rates, it will yet be a tax somewhat formidable; we must furnish land to raise the cane; this must be plowed, planted, hoed, stalks gathered, crushed and pressed, and fuel used to evaporate the water in the juice. What all this labor, etc., will make it worth by the gallon or pound, now, or what it will cost when every arrangement for reducing the juice is fully established, it is impossible to tell.

These things are mentioned not to condemn or discourage the production of sugar by these means, when nothing else offers better; but as I am about to offer another substitute, I wish to make it appear as favorable in contrast as possible. We are not indebted to China for its origin, nor is the labor of the husbandman specially required in its culture. It is produced by forest and lawn, field and garden; even our very roadsides teem with abundance. I allude to the article of honey. Not one person in ten thousand has the least conception of the enormous quantity of this delicious nectar annually wasted at our very doors, all for the want of a due consideration of its importance. We make an estimate from the following facts in support of our assertion.

In the summer of 1856, there was collected from an estimated area of ten miles square, over 42,000 lbs. of honey. The number of stocks in spring was about 800, the increase by swarms, 400, after supplying deficiencies in the original number. 22,000 lbs. of this product (including glass boxes) was surplus or box honey; 12,000 was stored by the new swarms, (30 lbs. each,) 8000 was taken from the old and deficient hives, that had to be taken up. The amount in the old stocks for wintering the bees is not estimated. Ten miles square being an area of one hundred square miles, would give one square mile for every eight stocks, thus producing 420 lbs. of honey to the square mile. Taking these results as a basis for an estimate of what is wasted, we will see what was produced by this (New York) State alone, which contains 47,000 square miles. Supposing each square mile to produce 420 lbs., we have an aggregate of 19,740,000 lbs. Should we go further, and take the millions of square miles in the United States and Territories at the same rate, or a tenth part of it, it would go a great way towards furnishing us with sweet, at least in productive seasons. The probability is, that not a tithe of the honey produced on this area of ten miles square was collected, if we should judge by the number of stocks maintained on a square mile in some parts of Europe. Quotations by Mr. Langstroth state: "In the province of Attica, in Greece, containing forty-five square miles, there are kept 20,000 hives." "East Friesland, a province in Holland, containing 1,200 square miles, maintains an average of 2000 colonies per square mile."

The summer of 1857 produced only about one-quarter of the fore mentioned results. The one season being the *best*, and the other the *poorest* we have ever known, the two together would make an average of about 26,000 lbs. that might be expected annually from that number of stocks. Taking this average as a data, what would be the cost per pound? One man can take charge of one hundred stocks, or one-eighth of the whole, but it would require only about two months of his time in the year; yet nearly another month would be required by a mechanic, or a man sufficiently skilled to use a handsaw and hammer to make hives, boxes, &c.; say the labor would be $75, cost of materials, $50. Now if no interest is reckoned for money invested, this honey costs less than four cents per pound. But if we take the price that honey often commands in market, about 20 cts., the 3250 lbs. (the average amount that 100 stocks would collect,) will amount to $650. Deduct the expenses, $125, and there will be left $525 for the annual profits of bee culture, which ought to be enough in one season to pay all necessary costs in purchasing stocks to start an apiary of that extent. Several instances are known, where the products sold, aside from the increase of stocks, was more than sufficient to pay all charges in care, as well as the original cost of the apiary. This is paying very well for labor and money invested. What pays better? We have shown, conclusively, it would seem, that there is sufficient material in the country for extensive operations. We have shown also, that its collection is a practical, and at the same time, a profitable business. All that now seems wanting to render this product available, is the energy to

acquire the requisite skill for proper management. By a few this *has been* acquired by patient, persevering effort, sufficient, at least, to succeed for many years, without any aid but what was gained by experience. It is now quite different. The inexperienced can, if they choose, take the shorter route, by appropriating to their own use the experience of others, found in the numerous treatises on the subject. M. QUINBY,

Author of Mysteries of Bee-Keeping Explained.

St. Johnsville, N. Y., 1858.

LEACHED ASHES FOR MANURE.

We are fully aware how much public opinion has changed with regard to the value of leached ashes as a manure, but at the same time have reason to believe that large quantities of it are suffered to be wasted, and that, even within the circle of our intelligent readers, there are some cultivators who do not properly appreciate it yet. We propose, therefore, to place before the reader the opinions and experiments of some others, to give force to what we have often stated ourselves in regard to the value of this article.

Mr. COLMAN, in his valuable "Report on the Agriculture of Massachusetts," in some observations relative to the value and efficacy of the manures used by the farmers of this State, says: "ashes, leached or crude, have been applied by different individuals with various success. A farmer of high authority in Newbury states—'I think leached ashes very valuable to spread on grass land; likewise for onions and grain. I use twenty or thirty cart loads a year, and gave this season $3 per load of fifty bushels.' Another respectable farmer says 'he deems them of no use unless applied in conjunction with other manure, and then of great efficacy. In their application upon a rich loam to corn, both in the hill and spread round the hill at the first hoeing, I have seen no beneficial result from them.'"

The question naturally arises here, whether, if the corn had been planted on a *poor loam*, or on a *poor gravelly soil*, and part of the crop had been treated with ashes, and a part not, there would not have been a marked difference between the two? But the ashes was applied on a *rich loam* that would have brought a good crop alone. That is not the best mode of testing special manures.

Judge BUEL, of Albany, a man whose pen cast light upon many subjects, and whom we cannot accuse of having given currency to a single sophism, in the long course of his most arduous and philanthropic efforts to ameliorate the condition of American agriculture, says:—"leached ashes, or soap-boiler's waste, which contains always a quantity of lime, I have used with advantage for wheat;" and another distinguished writer, whose labors have, like those of the individual first named, been the means of arousing and directing inquiry on many important topics, remarks:—"Leached ashes I have always found to be a most genial and efficient manure. As a top-dressing for grass lands—applied at the rate of twenty-five or thirty bushels per acre, according to circumstances, they are unsurpassed. They correct acidity, and sweeten the soil, and have a powerful effect in warming and imbuing it with energy and life. I consider them an economical and desirable manure at seventeen cents a bushel, even where I am compelled to draw them from three to eight miles."

We have often witnessed the good effects which Judge Buel describes, and not only on grass lands, by which we suppose he means mowing lands,—but on pastures which had become greatly impoverished, and even partially covered with moss.

In the *Farmer's Cabinet* an intelligent correspondent observes:—"Of all things to make grass grow, ashes beat; this you may depend upon, for I have tried it often, and it has never failed yet. Collect as much of it as you can, the more the better, and spread it over your grounds, and *see if I am not correct in my assertions.*"

A writer in the *Farmer's Journal*, observes:—"I do not see wood ashes very often spoken of as a manure, in our agricultural papers. I am inclined to think that they are not valued so highly as they deserve. I have had a pretty favorable opportunity for observing their effects. In my boyhood, a soap-boiling establishment was set up in the neighborhood in which my father lived, in which large quantities of wood ashes were used. The man who carried it on had a farm of about a hundred acres, which, under a faulty system of management, had got very much run out, and the owner was getting every year more and more in debt. After he commenced soap-boiling, there being little demand for his leached ashes, he applied them liberally to his land, and soon, from being one of the poorest, his farm became decidedly the most productive in the town. His crops repeatedly obtained the premiums at the county cattle shows. I think I never knew so great a change produced on a farm in so short a time. It was a subject of general and admiring observation. By the increased productiveness of his farm, added to the profits of his soap-boiling he soon freed himself from his pecuniary embarrassments, and at his death he left to his children not only a farm free from all incumbrances, and in a high state of cultivation, but also considerable other property which he had accumulated. The soil of the farm was light, inclining to sandy."

With these facts before us, and many others which are constantly occurring, it would seem that sufficient evidence has been accumulated to

convince the most skeptical minds on this subject. In our travels through the State we frequently see piles of brush and rubbish of various sorts, carried away from the fields to the road-side or other uncultivated spots, and there burned,—thus two errors are committed; first in the loss occasioned by not burning upon fallow land, or land that is intended to be plowed,—and secondly, by fertilizing in a high degree the road-side, and stimulating it to produce thistles and burdocks, which shall annually scatter their seeds broadcast over the contiguous fields. There is room yet for considerable more *head work* on the farm!

For the New England Farmer.

ESSEX TRANSACTIONS.

By the kindness of a friend, I have just been favored with a copy of the transactions of the Essex Agricultural Society for 1857. If I do not mistake, this will be found equal, if not superior, to any of the annuals put forth by this Society. Although Essex cannot boast of the quality of its soil, or other natural advantages, still it has ever had reason to be proud of the industry and intelligence of its citizens. In proof of this no better evidence is needed than is found on many of the pages of this pamphlet, exceeding two hundred in all, neatly printed at the *Herald* office, in Newburyport.

First comes Dr. Kelly's address on "home and its embellishing arts," containing many suggestions worthy of careful regard, expressed with pleasant humor and wise consideration. Then the accomplished Secretary's report of the show, and practical advice for future use. The report of that veteran in fruit culture—known and respected by every gardener in the land. An agricultural show in Essex without the name of IVES appended, would be an entire misnomer. Then there is a beautiful essay on the culture of the strawberry, by one who demonstrates that he knows of what he writes. Then come the flowers of the field and the garden, displayed with all the adroitness of a Sanborn, who never fails to excite your risibilities. Then the truly philosophic views of vegetable culture by an expert in these matters, from the rock-bound shores of Marblehead. Then the reports of the several committees charged with active duties on the day of the show, containing many suggestions of value—although not quite as full as they should have been—for what is the use of a show if its peculiarities cannot be recorded for instruction? Then we have a report on farm implements, drawn by a veteran in the service, and condensing the best intelligence yet brought out, though leaving much lee-way for more to be learned. Then comes the report of the committee on farms, which will bear a second perusal. Then Mr. How's suggestion as to the improvement of pasture lands, the necessity of which will be apparent to every one who journeys through the commonwealth. Root crops are also noticed, as no agricultural report of Essex would be complete without these. Then come elaborate experiments on the Chinese Sugar Cane, from which syrup is extracted, but no sugar is matured. Then inquiries as to the management of an "experimental farm," generously donated to the Society by the late Dr. Treadwell, of Salem. Such is a bird's eye glance at the contents of this pamphlet.

ESSEX.

Dec., 1857.

TO MANAGE A REARING HORSE.

Whenever you perceive a horse's inclination to rear, separate your reins and prepare for him. The instant he is about to rise, slacken one hand, and bend or twist his head with the other, keeping your hands low. This bending compels him to move a hind leg, and of necessity brings his fore-feet down. Instantly twist him completely round two or three times, which will confuse him very much, and completely throw him off his guard. The moment you have finished twisting him round, place his head in the direction you wish to proceed, apply the spurs, and he will not fail to go forward. If the situation be convenient, press him into a gallop, and apply the spurs and whip two or three times severely. The horse will not, perhaps, be quite satisfied with the first defeat, but may feel disposed to try again for the mastery. Should this be the case, you have only to twist him, &c., as before, and you will find that in the second struggle he will be more easily tamed than on the former occasion; in fact, you will see him quail under the operation. It rarely happens that a rearing horse, after having been trained in the way described, will resort to this trick a third time.—*British Sportsman.*

THE USE OF BONES.

A. E. Schmersahl, of England, has patented an improvement in the manufacture of gelatine, glue and manure from bones. The patentee obtains bones, and separates from them blood and such other substances which are soluble in water, so as to deprive them of putrescent matters, which, according to the usual manufacture, become mingled, or partially so, with the gelantine, &c. The bones thus purified he treats with an acid, in order to dissolve the phosphate, or other salt of lime, leaving the gelatine in a solid state, which after being washed, may be used as an article of commerce, or boiled into a paste or jelly, ready for immediate use. The liquor in which the bones have been macerated he reserves, and extracts therefrom phosphorus or sal-ammoniac, and superphosphate of lime, applicable as a manure.—*S. American.*

COLOSSAL WALNUT TREE.—On the road from Martel to Gramant (Lot) is to be seen a colossal walnut tree, at least 350 years old. The height of this tree is about 55 feet; its branches extend to a distance of 125 feet; the trunk, 14 feet in diameter, is only 20 feet high, but it sends out seven immense branches.

It bears on an average each year 15 bags of walnuts. Older trees grow near, but they are of very moderate dimensions.—*Galignani's Mess.*

☞ On Monday, the 11th inst., two large flocks of wild geese were seen flying over East Hartford, Conn., on their way northward.

For the New England Farmer.

ERRORS IN BOOK FARMING.

Mr. Editor:—So contradictory are many of the statements concerning agricultural operations, published in agricultural journals, and recorded in "the books," that it is hardly to be wondered at that so many farmers decry "book farming," or that the new beginner should despair of ever being able to pursue the business of farming upon any reliable basis or settled principles of action. Now while it is partly true that agriculture is not one of the exact sciences, there is still a vast amount of settled fact concerning its practical pursuit, and many of these facts can be reduced to rules, as certain in their operations as the rules of any of the exact sciences. Rules of science are established upon well defined facts, and facts are rendered thus available only by patient investigation of the conditions under which they are developed. Now every fact that is a fact in agriculture, is so only upon certain conditions, and if in the application of any one of these facts we overlook, neglect or ignore these conditions, the fact may prove a stumbling-block in our way instead of aiding us in our labors. It is from the superficial manner in which experiments in agriculture are often made, and their results given without intelligent observation of the circumstances and conditions on which they are based, that so many errors and contradictions occur in "book farming," and which robs this source of knowledge of much of its real value and usefulness. I have been led to these reflections from noticing an article in the *N. E. Farmer* of Dec. 19th, entitled "Little Things by the Way-side," cautioning farmers against feeding corn fodder to milch cows, because it would decrease their milk. Now not only myself, but hundreds of better farmers, know the value of corn fodder, both dry and green, for milch cows, too well not to know that such advice is absurd and contrary to all intelligent experience. That green corn fodder is often fed to milch cows without profit I have no doubt; when, for instance, it is fed in such a manner as, while it is insufficient for the animal's entire food, it begets a dependence upon this extra feed, and renders the animal indisposed to seek other and more feed from the pastures. But it is a fact well established that corn fodder, both dry and green, when intelligently fed out, is one of the best milk-producing fodders amongst the list of grasses.

Again, if it be true, as stated in an editorial in the last issue of the *N. E. Farmer*, (Dec. 26th,) that Hon. Elmer Brigham, of Westboro', obtains an extraordinary amount of milk from his cows, by feeding only twelve lbs. of hay and two quarts of meal each per day, surely Mr. Brigham must have discovered the means of making milk (real cow's milk) cut of almost nothing—a discovery more valuable to a hungry world than would have been the discovery of the long sought "philosopher's stone," which was to turn everything into gold. But I apprehend that here, too, is another "error in book farming;" since every intelligent farmer knows that a milch cow cannot be profitably sustained upon any such quantity of food. Not less than twenty lbs. of good hay per day will well sustain an average size milch cow during the feeding season; and this quantity will not produce a liberal flow of milk unless grain or roots be added thereto.

By reference to the Report of the Massachusetts Board of Agriculture for 1855, it will be seen that, in a series of very carefully conducted experiments upon the feeding of stock, the average quantity of dry fodder actually consumed by thirteen milch cows for twenty days in February was nineteen lbs., together with twenty lbs. of carrots and five lbs. of cob-meal—each per day—while seven dry cows consumed in the same time twenty-one lbs. of dry fodder each per day; and for the next twenty days the same milch cows consumed nearly twenty-three lbs. of dry fodder, (it not being of quite so good a quality,) together with twenty-five lbs. carrots and five lbs. cob-meal each per day, while the dry cows consumed each per day nearly twenty-seven lbs. dry fodder and twenty lbs. carrots. These results perfectly correspond to the general experience of all farmers who have taken the trouble to ascertain by weight the amount of food required by the average of cows. Animals require *quantity* as well as *quality* of food. The philosophy of feeding our farm stock has been but little attended to by farmers generally; yet it is a field of inquiry which will pay as richly for investigation as any the farmer can explore.

If these remarks shall serve to correct the "errors" alluded to, something will have been gained towards advancing the usefulness of that valuable—though often much abused source of knowledge—"*book farming.*" T. A. S.

Westboro', Jan. 9, 1858.

For the New England Farmer.

SUGAR CANE SYRUP.

Mr. Editor:—Last spring, hearing a good deal about the *Sorghum* or Chinese sugar cane, and wishing to know more about it, I procured some seed and planted a small patch containing about one-fourth of an acre, planting it very thick in drills, for fodder, not having any idea that it would make molasses, as it was late when I planted it, and it did not fully ripen; but having read in the papers that molasses had been made from it, I concluded to try it and know for myself. I made a wooden mill on the same principle of a cider mill, with which I could press out, (using one horse,) from one hundred and fifty to two hundred gallons of juice a day, and procuring a sheet iron pan four feet long, two feet and a half wide and one foot deep, I commenced proceedings. In the first place, I set two upright posts in the ground, about six feet apart, and building a fire between the two posts, I suspended the pan over the fire, and having some juice already expressed I commenced boiling down, adding more juice as it boiled away, and skimming off the skum as fast as it would rise, while at the same time my man was expressing it as fast as I had occasion to use it. I would generally boil all day, commencing in the morning and adding more juice as it boiled down, and at night I would have from fifteen to twenty gallons of good, nice syrup, as good or better than most West India molasses. After I had commenced making syrup, I bought all I could of the cane from my neighbors, and obtained one hundred and five gallons

of syrup, which will sell readily at one dollar a gallon here.

There are a number of people here that are going to try the business next summer, and I think I will continue it myself. I have not succeeded in making any sugar, and if any of your subscribers will inform me, through your paper, the manner of making it, I would be much obliged. Can you inform me of the best mill for crushing the cane and where the iron rollers or cogs can be obtained, and what will be the price? THOMAS SHACKLEY.

Grinnell, Poweshirk Co., Iowa.

For the New England Farmer.

STEAM PLOWS.

BY HENRY F. FRENCH.

At Ipswich, in England, on the fourth of July, 1857, I saw in operation Fowler's Steam Plow. Having previously seen at the workshop of Ransome and Simes the same implement, and having had its principles of operation carefully explained, I spent several hours with it while in actual work upon a large field, where it had already plowed many acres. It was, while I observed it, turning furrows seven inches deep by about ten in width, carrying three at a time, and performing its work as well as it could be performed in the usual way, with horses. I carefully paced out the length of furrows, and measured their depth and width, and with my watch in my hand timed the operations, and ascertained that the machine was then plowing one acre per hour.

The arrangement was to use four plows and open four furrows at each passage across the field, and in that way the labor accomplished would be one-third more. It is difficult, without drawings for illustration, to describe intelligibly the details of such an implement, but its general plan of operations may be readily understood. The plows are arranged in two gangs of three or more, one gang at each end of a heavy frame-work, which is balanced across an axle supported by two large wheels like those of a heavy gun carriage. This framework, with the plows, is drawn across the field by a stationary engine. As it is drawn northerly, for example, in its work, the frame which carries the plows is borne down, so as to lift the gang of plows at the northerly end high into the air, bringing down the southerly end with its plows so that they enter the soil for plowing. The depth is guaged mainly by a large wheel at each end of the frame-work, opposite the plows, which wheel is in turn lifted into the air or brought down to the surface with the gang of plows to which it belongs.

Two men sat upon the machine, one to guide its motion by appropriate machinery, the other to make signals with a flag, or do any other useful work that occasion might require.

The engine in use was upon one side of the field, and was called a stationary engine. It was drawn to the field by horses, but had powers of locomotion sufficient, I think, to move itself along the head land. The plow was drawn *towards* the engine by a wire rope, which was wound round a cylinder attached to the engine. It was drawn *from* the engine by a wire rope which passed across the field round a pulley made fast at the opposite headland. This pulley was held by what was called an *anchor*, which anchor was in the shape of a four-wheeled low cart or car, loaded heavily with stones. The wheels of this car were of iron, and sharp at the edges, so that they cut down nearly to the axle. This anchor was drawn along the headland by a windlass worked by a man, in a direction at right angles with the furrow, so that the strain upon the pulley was across the track of the wheels. In justice to the inventor, it should be stated, that he had already, it was said, constructed machinery to be worked by the engine to move the anchor, and so dispense with the man at the windlass.

It will be seen at once, that this machine could only be of practical utility on level, clear fields, of large extent. It could be used only upon level fields, or rather fields of uniform surface, because the plows are set in an unyielding frame, and must run at the same level, thus running deeper across a hillock, and more shoal in a small depression. They are arranged, not so as to be raised and depressed each separately, as the machine is moving, but the whole gang are acted upon at once. Again, the machine would be of no use in a small enclosure, because of the broad headlands requisite to accommodate the engine on one side and the anchor on the other.

It could be of little use in a field obstructed by stumps or roots or stones, because of the inequalities of surface produced by them, and because if one of the plows meets an obstruction too obstinate to yield, the power of the engine must generally be sufficient to break the plow, or what is more common, the rope. The breaking of a plow must involve, at least, the necessity of a delay sufficient to detach it and substitute another, and such a delay, of so large and expensive a force as we shall presently see is employed, must be of considerable importance. The breaking of the rope, which I was informed by the workmen was of frequent occurrence, is soon remedied by splicing it, but is probably a constant source of annoyance. As, however, it is impossible to foresee all obstructions, and the engine must exert great power, it is perhaps best to make the rope the weakest part of the machinery, as it is the most easily repaired.

The force employed in this operation, as I witnessed it, besides the engine, consisted of five

men and a boy; to wit, the engineer, who remained by the engine, a boy to carry coal, one man upon the plow, to manage it, another man who rode part of the time on the plow, and who ran along before it to remove pulleys or rollers over which the rope traversed to keep it from friction on the ground, another man to tend the windlass and anchor, and the other to keep the rope in place with a crow-bar, that it might wind properly round the drums at the engine. In estimating the value of such an implement as this, there are certain elements always to enter into our calculation. 1st, The amount of labor performed. A span of horses and a plowman would in England plow, as a regular day's work, one acre of such land as that under experiment. They would work six hours without feeding, and in that time complete the day's work. This is the practice, I think, in most of England, as to working horses. Six plowmen and twelve horses, then, would for six hours perform the same work as the five men and boy and the engine and all the machinery. But the engine would not then be fatigued, but might labor on while the horses must rest. Still, taking into account the liability of complicated machinery, and of so great a length of rope to accidents, which must cause delay, perhaps the steam plow could hardly be expected to be actually at work more hours per day than the horses. 2d, The expense and time employed in moving the engine and plow and anchor on to the field of operation, and placing them in position. I did not see the engine or machinery moved with horses, but this item is worth a place in our estimate, both as to expense and time. 3d, The cost of working, which has been already partly considered, but there is to be added to the cost of the labor already named, the expense of supplying the engine with fuel and water. Both the coal and water are of heavy freight, and must be conveyed to the engine by horses and men. Their cost, at the field, must depend so much on locality, that it is useless to attempt an estimate. Probably an additional pair of horses and a man would be usually employed to supply the meat and drink of the steam giant. 4th, The cost of machinery and of repairs upon it. It was said that this engine and plow could be furnished ready for use for £500, or $2500. It would require an engineer to estimate the cost of repairs. Unless the machine could be kept in constant use, the interest on its cost would be a heavy item, and in all cases must be a constant element to be regarded. The engine would be adapted to other farm labor, such as threshing, grinding and the like. Such engines are in constant and extensive use for threshing, throughout England, on large farms. The inventor of this steam plow had taken a large contract to plow for several proprietors, a practice which, perhaps, should be kept in view in this discussion, though the difficulty of moving the engine from farm to farm in this country would be far greater than in England, because our roads are not so well made.

Upon the best estimates that I have been able to make, it seems to me that Fowler's steam plow can never be made an implement of general practical utility, either in this or any other country. Perhaps a more competent person, with such data as have been furnished, may form an estimate more favorable. Simplicity is usually economy, in agriculture especially, and there does not seem upon the theory of this machine any such promise of performance as to compensate for the great expenditure in its structure, and the numerous obstacles to its practical operation.

A large premium has been offered by the Royal Agricultural Society for a useful invention of a steam plow, and under this stimulus three competitors entered the field at their exhibition at Salisbury, in England, which I attended in July, 1857. Fowler's Steam Plow, which has already been described, was one of them. Another, called Williams' Patent, drawn by a stationary engine with ropes, and guided partly by a horse in a pair of shafts, appeared not to satisfy the exhibitor himself in its operations. It differed from Fowler's in this, that it had to be turned at the end of the furrow instead of running back and forth with a double set of plows. All the objections to Fowler's plow seemed to apply to this also. The third, operating on an entirely different plan, deserves a more particular notice in a future number.

For the New England Farmer.

TURNIPS VERSUS WITCH-GRASS.

Witch-grass, or "*Quacks*," as it is called here, is very troublesome in this vicinity. Having about one-fourth of an acre last spring completely covered with it, I was desirous to find some means to destroy it. The soil was a sandy loam, sand predominating. I knew that frequent plowing and harrowing, in dry, hot weather, would kill the weed, but I wanted to find some means of exterminating it, and at the same time to raise a crop that would pay for the labor. While reflecting upon the best method to pursue, an article appeared in the *New England Farmer*, Vol. IX., p. 162, which induced me to try a crop of turnips. Accordingly, I had a pretty liberal dressing of manure from the barn-yard applied and plowed under, and the ground well harrowed. After a few weeks it was plowed and harrowed again, and a *wagon-load* of grass roots was raked up and drawn into the middle of the highway. About the 20th of the 6th month, the plowing and harrowing were repeated, and the 24th it was sown with ruta-buga seed, *as I supposed*. The seed was sown by hand in drills two feet apart. It came up well, but in a few days it became evident that I had been deceived in the seed, and that in-

stead of ruta-baga, a *poor, purple-topped, tap-rooted variety* of early turnip seed had been sold to me. A small quantity of seed purchased earlier in the season was mixed with this, and proved true. Whether the seedsman or his agent was in fault I cannot say, but the fact that farmers are occasionally imposed upon in this manner, should induce them to raise their own seed, especially such varieties as are sown in considerable quantities.

In due time the ground was hoed three times, and the plants thinned, and in the fall 150 bushels were harvested. Had I not been *cheated* in the seed a good crop would have been raised. However, I may as well make the best of it.—My main object was nearly accomplished. The "*Quack*" was so well subdued that but little appeared in the fall, and I think good culture next year will subdue it entirely.

KING PHILIP CORN.

I planted two ears of this variety last spring from which I raised not less than two *bushels* of sound, shelled corn. I took the first premium at our County Agricultural Fair, a merely nominal gratuity, however, as Indian corn was not enumerated in the list of articles for specific premiums. I would advise all who plant corn to try the "King Philip."

BUGS ON VINES.

They attacked mine last spring, as usual, but a mixture of about four parts ground pepper and one part flour, sifted on when the leaves were wet proved too strong for them. If rain washes it off, repeat the dose. What will destroy the corn, slug or "*cut worm?*" L. VARNEY.

Pictou, Prince Edward County, C. W., 1st Mo., 1858.

For the New England Farmer.

BORERS.

Do borers winter in the ground and ascend the tree again in the spring? In the fall of 1856 I noticed that my young peach trees were attacked with borers; I examined their holes with a sharp knife and a wire, but could not find a single borer.

In the early part of May, 1857, I again looked at the trees, and was surprised to find, under the bark where they worked the year before, so many borers of all sizes, from full-grown ones to those but just hatched; they all appeared to be going up the tree, and I took twenty-five or thirty from some of the trees.

This fall the trees were not affected by them.

Barre, Dec., 1857. W. A. P.

REMARKS.—We make the following extract from Prof. HARRIS's "Insects Injurious to Vegetation," which explains the habits of the Borer.

"The pernicious borer, which, during many years past, has proved very destructive to peach trees throughout the United States, is a species of *Ægeria*, named *exitosa*, or the destructive, by Mr. Say, who first scientifically described it in the third volume of the 'Journal of the Academy of Natural Sciences of Philadelphia,' and subsequently gave a representation and account of it in his 'American Entomology.' In the fifth volume of the '*New England Farmer*' I have given the history of this insect, have mentioned the principal authors who have noticed it, and recommended preventive measures, which have been found effectual in protecting the peach tree from its most serious attacks. The eggs, from which these borers are hatched, are deposited, in the course of the summer, upon the trunk of the tree near the root; the borers penetrate the bark, and devour the inner bark and sap-wood. The seat of their operations is known by the castings and gum which issue from the holes in the tree. When these borers are nearly one year old, they make their cocoons either under the bark of the trunk or of the root, or in the earth and gum contiguous to the base of the trees; soon afterwards they are transformed to chrysalids, and finally come forth in the winged state, and lay the eggs for another generation of borers. The last transformation takes place from June to October, most frequently, however, during the month of July, in the State of Massachusetts. Here, although there are several broods produced by a succession of hatches, there is but one rotation of metamorphoses consummated within a year. Hence, borers, of all sizes, will be found in the trees throughout the year, although it seems necessary that all of them, whether more or less advanced, should pass through one winter before they appear in the winged state. Under its last form, this insect is a slender, dark blue, four-winged moth, having a great resemblance to a wasp or ichneumon fly, to which it is sometimes likened. The two sexes differ greatly from each other, so much so, as to have caused them to be mistaken for two distinct species. The male, which is much smaller than the female, has all the wings transparent, but bordered and veined with steel-blue, which is the general color of the body in both sexes; the palpi or feelers, the edges of the collar, of the shoulder-covers, of the rings of the abdomen, and of the brush on the tail, are pale yellow, and there are two rings of the same yellow color on the shins. It expands about one inch. The fore wings of the female are blue and opake, the hind wings transparent, and bordered and veined like those of the male, and the middle of the abdomen is encircled by a broad orange-colored belt. It expands an inch and a half, or more. This insect does not confine its attacks to the peach tree. I have repeatedly obtained both sexes from borers inhabiting the excrescences which are found on the trunk and limbs of the cherry tree; and moreover, I have frequently taken them in connexion on the trunks of cherry and of peach trees. They sometimes deposit their eggs in the crotches of the branches of the peach tree, where the borers will subsequently be found; but the injury sustained by their operations in such parts bears no comparison to that resulting from their attacks at the base of the tree, which they too often completely girdle, and thus cause its premature decay and death. The following plan, which was recommended by me in the year 1826, and has been tried with complete success by several persons in this vicinity, will effectually protect the neck, or most vital part of the tree, from injury. Remove the earth around the base of the tree, crush and destroy the cocoons and borers which may be found in it, and under the bark, cover the wound-

ed parts with the common clay composition, and surround the trunk with a strip of sheathing paper eight or nine inches wide, which should extend two inches below the surface of the soil, and be secured with strings of matting above. Fresh mortar should then be placed around the root, so as to confine the paper, and prevent access beneath it, and the remaining cavity may be filled with new or unexhausted loam. This operation should be performed in the spring or during the month of June. In the winter the strings may be removed, and in the following spring the trees should again be examined for any borers that may have escaped search before, and the protecting applications should be renewed."

LETTER FROM MR. BROWN.

Washington, Jan. 19, 1858.

My Dear Sir:—The United States Agricultural Society closed its sessions on Friday, the 15th. During that day there was a long and animated discussion upon the feasibility of raising the *Sorghum* and the *Imphee*, and their respective merits. The Imphee is an African plant, and is thought by some persons to be superior to the Sorghum for the purpose of fodder, syrup or sugar. Mr. Leonard Wray was introduced, and stated that he had been a sugar planter in the West and East Indies, and also forty years in Caffraria, Africa, and that he discovered the Imphee in Caffraria, and from that place had introduced the plants into Australia, New Zealand, France and Algeria, and on the American continent from Canada southward to the Brazils. Having gone to the Cape of Good Hope, he heard so much there of the beauty and fertility of the country about Port Natal that he went thither, and liked it so well as to stay there three years. It was here that he met with the Imphee. This plant will not yield much sugar when grown in rich saline swamps where salts of iron prevail, but is rich in saccharine matter when grown on warm, sandy loams. He thinks the Chinese sugar cane was taken originally from Africa by the Portuguese. The seed of the Chinese sugar cane is black—that of the Imphee is white, and will produce from 50 to 250 bushels an acre, is made into flour and produces good bread. The discussion on the topic of the sugar canes was long, and sometimes exciting considerable sensation, as Mr. Wray thought the Patent Office had interfered to prevent the sale of the Imphee seed and the introduction of the plant. Dr. Charles T. Jackson, of your city, was present, was called upon, and his statements were listened to with marked attention.

When this "vexed question" had been hushed, Dr. Higgins, State Chemist of Maryland, made an interesting report upon the subject of *Hog Cholera*. He declared the disease, though popularly called *cholera*, to be properly a *Pneumonia*, the seat of lesion being in and around the lungs, and not the bowels. The remedies are therefore like those in a case of epidemic. The cause of the disease lies in an excess of fibrin in the animal's blood, which makes it too thick, and consequently unable to pass with the requisite facility through the arteries of the lungs. Hence the necessity of an alkaline carbonate is indicated, and he had found a mixture of *equal quantities of carbonate of soda and barilla* to be a perfect curative. His rule was to give two grains of the mixture in swill three times a day to each hog, and it had been in all cases successful, when the case was not too far gone. Dr. Higgins remarked, in answer to a question put by a member, that the value of the hogs which died last year amounted to several millions of dollars. He had seen them die in as large a number as five hundred in a day! This disease was not confined to the South and West alone—a great number were lost in New England, probably at the rate of seven out of ten of many droves of hogs sent there. If this simple remedy shall prove as effectual as has been represented, this fatal scourge may be arrested.

The business of the session now being closed, the President, Gen. Tilghman, rose, and in a short and appropriate address, adjourned the Society to meet again next year.

All the sessions of the Society have been marked by an earnest zeal which indicates an interest in the cultivation of the earth that promises much for the future. Massachusetts was well represented in these councils. I saw present from that State, Messrs. French, Brooks, Newell, Phillips, Flint, Loring and Chandler. If these gatherings, and the transactions of the Society, do not strike out any new and heretofore untrodden path to the agriculturist, they cannot fail to awaken new efforts in many, and arouse an emulation in the art which will greatly increase the products and the profits of culture. Beside this, they certainly have a tendency to cherish feelings of friendship and regard between the citizens of different sections, and to introduce to each other the various improvements and progress in agricultural art.

Our meetings have taken place in what is called the "East Room" of the Smithsonian Institution; it is the room in which the philosophical instruments are deposited, but contains maps, and drawings of fishes and animals, and among the rest what is called "*A Marine Aquarium.*" This is a case about five feet long by eighteen inches high, and three feet wide. It stands upon a frame, the height of a common table, upon which rests a white marble slab; into this slab grooves are cut near the edges, into which thick plate glass

is fitted, so that it is water tight, and the whole is covered with wire gauze. Sea sand, pebbles and rocks are then placed in it, together with a variety of sea plants, and several species of animals, and then the tank or case is filled with sea water; this affords the beholder an opportunity of observing not only the animated life, but the habits of the animals themselves, which have heretofore been hidden from mortal view.

In this miniature ocean there are *thirty-eight* kinds of animals, including the order of *Fishes*, *Crustacea*, *Worms* and *Polypi*. In the order of fishes are the *Toad-fish*, *Butterfly-fish*, *Sea-horse*, &c. The latter is a most singular and interesting creature; his head so nearly resembles that of a horse as to preclude all thought of a comparison with anything else,—and he carries it as proudly as that of any steed that ever bounded over the turf. But all the rest of him is tail! He is perpendicular! He rises to the surface with all the dignity of a war-horse, or sails into mid-ocean with the majesty of an autocrat, and surveys the peopled world beneath his realm! The broad shoulders immediately below the head gradually dwindle to a long, flexible tail, which, when at rest, is gracefully coiled. On the back, just below the head, is a small dorsal fin, so delicate and transparent as to escape observation, unless to a critical eye;—there are also fins of the same kind on the body. The last time I saw him he had a sea-serpent in the embrace of his tail, where he held him for a full half hour, his head rising to mid-ocean and his eye surveying the vast deep on every side.

Among the *Crustacea*, were the *Crab*, *Sea-spider*, *Shrimp*, *Prawn*, *Wharf-louse*, *Beach*, and *Sea-fleas*, *Sea-goat* and *Barnacles*. In the order of *Worms*, the *Tube-worm*, *Sand-tape*, &c., and in the *Polypi*, were the *Animal Moss* and the *Sea Anemone*. The latter seems to be the connecting link between animal and vegetable life; for although appearing like the under side of a toad-stool, it moves from place to place, and upon placing a piece of raw beef or a fly near it, will close its delicate fibres upon, and consume it. Some of the animals secrete themselves during the day, and only come forth to seek their prey in the night. Others, such as the *Sea-lion*, cover themselves in the sand, leaving only their glistening eyes in sight, and pounce upon their unsuspecting victims. In this deep ocean-life the observer can see all the jealousies, rivalries, and contentions so common in the higher order of animal life upon the surface of the earth. Here we have, in miniature, some of the wonderful operations of the great sea, and find opened to our eyes a new world of animal and vegetable life, all expressing with new force the wisdom and power of Him who made them all.

The water with which the tank is filled is never changed; the sea plants and animals mutually supporting each other by their exhalations; as the plant respiration consists in giving out oxygen and absorbing carbon, and animal respiration is exactly the reverse. The sea weeds are covered with numerous little bubbles looking like silver drops which are filled with oxygen gas. These supply the air in the water with that life-giving element, while the animals themselves give out carbon for the plants.

I must leave for another letter my visit to the Botanical Gardens, to the Indian delegations, public buildings, &c., and am,

Truly yours, SIMON BROWN.

Joel Nourse, Esq., Boston.

PERSEVERE.

I'd not give up!—no! grim despair
Should never forge a chain for me,
Whilst thus I breathed my native air,
Within a land of liberty!
No! dastard were that soul that cowers,
Within a free-born land like ours.

I'd not give up! though every frown
That Fortune's face is wont to wear,
Should rob me of the small renown
That may have been my humble share—
Should thwart my every wish and will—
Fortune, through all, I'd woo thee still!

Shame on the weak and craven heart
That bows beneath each transient sorrow,
Without the nerve to pluck the dart,
And greet the sunrise of the morrow!
Without the will—for will is power—
To pluck the thorn, and cull the flower!

For what, to man, is manhood given?
For what his varied powers of mind?
For what his every hope of Heaven,
When earth's fair gifts have been resigned,
If not to brave misfortune's thrall,
And rise superior to them all?

Then raise that drooping brow of thine;
Resolve—and then *endeavor!*
Give sorrow to the laughing wind,
With fear and doubt, forever!
Pass onward, and despond no more—
Thy motto be, "*Excelsior!*"

FAMOUS ENGLISH OAKS.—*The King Oak*, Windsor Forest, is more than 1,000 years old, quite hollow. Professor Burnet, who once lunched inside this tree, said it was capable of accommodating ten or twelve persons comfortably at a dinner sitting.

The Beggar's Oak, in Bagshot Park, is 20 feet in girth, five feet from the ground; the branches extend from the tree 48 feet in every direction.

The Wallace Oak, at Ellerslie, near where Wallace was born, is 21 feet in circumference. It is 67 feet high, and its branches extend 45 feet east, 36 west, 30 south and 25 north. Wallace and 300 of his men are said to have hid themselves from the English, among the branches of this tree, which was then in full leaf.—*Downing's Landscape Gard.*

For the New England Farmer.

EXTIRPATION OF WEEDS.

MR. EDITOR:—Can not you or some of your numerous correspondents suggest some method for the extirpation of the numerous kinds of weeds, that are growing so luxuriantly over our fields, and by the sides of our fences and highways, and increasing every year? Would not it be a good plan for the Legislature of each State to interpose its authority for the destruction of weeds? At least, it is to be hoped that so useful a measure on an extensive scale, will yet be passed into a law. By some it is recommended that the destruction of weeds on the sides of roads should be done at the expense of the town; others, by the road-surveyors, and the expense to be stated in their accounts.

The prevention of the growth of weeds requires many precautions on the part of the farmer. There is great risk of carrying a nuisance to his fields, if he use unfermented manure, and great care should be taken, when grain is cleaned, that none of the offal, which contains the seeds of weeds, find its way to the manure pile. Grain for seed should be well cleaned before it is sown, and attentive farmers, will never purchase any seed but those of the cleanest and best sorts. Many fields, after being completely cultivated and sown with grass seed, have been found when re-plowed, after many years, to be stored with weeds of various sorts, most probably from some unfortunate mixture with the seed sown or deposited with the manure.

All plants which grow naturally among a crop that has been sown or planted, may be regarded as *weeds*, or, in other words, as enemies to the crop that is cultivated. The destruction of such plants, therefore, must be considered as one of the most important branches of the agricultural art; for if that is neglected, or even but slovenly performed, the crops may be greatly reduced, even on the best of soil. Besides, it merits consideration, that if weeds are suffered to exist, the full advantages of manuring land, and other improvements, can only partially be obtained. Nor is this all; the mixture of weeds prevents the crops from receiving the beneficial effects from the atmosphere, sucks up that moisture so essential for the growth of the crop, and the seeds of these weeds injure the quality of the grain. Notwithstanding all these injuries, how many are there who ever attempt to remove weeds in an effectual manner? This negligence is the more to be blamed, because, were farmers at the trouble of collecting all sorts of weeds, before they have formed their seeds, and mixing them with muck or almost any kind of earth and lime in its caustic state, or fermenting them with manure, they would soon be reduced to a soft pulpy state, and in this way, a pernicious nuisance might be converted into a valuable manure.

Various experiments have been tried to ascertain the positive advantage derived from weeding crops. The following is an example tried with wheat. Two acres of good soil was plowed and sown broad-cast. One acre was carefully measured off, and not a weed was pulled out of it—the other acre was weeded with care. The unweeded acre produced eighteen bushels of wheat, the weeded acre *twenty-two and one-half*—that is, one-fourth more in favor of weeding. The importance of weeding, both to the individual and to the public, is such that it ought to be enforced by law. At any rate, a law for fining those who harbor weeds, the seeds of which may be blown into their neighbors' ground, can have no injustice in principle. The justice, or some other town officer, might be authorized by law to issue an order, when complaint is made, for the immediate removal of such nuisances, and if not complied with, the offender should be fined a sum not exceeding $25, one-half to the informer, and the rest to the town or why not for the support of an agricultural society? I think, on the whole, keeping his land free from weeds ought to be a principal object with every farmer; and if this is not carefully attended to, I can assure him that he will pay dearly for his neglect. But the loss which he sustains does not remedy the injury which the public suffers from his slovenly conduct. These suggestions, concerning the regulations with regard to the extirpation of weeds, may be considered as both expedient and necessary, for were they adopted, it is evident, that many of the evils alluded to would be removed, and the wealth and agricultural resources of the nation materially increased. J. J.

Barnet, Vt., Dec., 1857.

SUDDEN APPEARANCE OF PARTICULAR SPECIES OF ANIMALS AND PLANTS.

The sudden appearance during some particular season, of immense numbers of a previously scarce, or even common species of insect, or plant, has arrested the attention of observers in all ages, and has been the basis of much sage reasoning in regard to the spontaneous-generation hypothesis. But at the present day, such vagaries have been entirely dissipated by the light of science.

When we consider that all these lower forms are extremely productive, and that many of their germs can remain for a long period inert, until favorable circumstances call their dormant powers into activity, there needs but a slight amount of reflection, to understand that as far as plants are concerned, a favorable season for the ripening of seed, succeeded by conditions equally favorable to germination, will, in soil adapted to its growth, have the effect of producing the greatest number of that particular plant exposed to such influences. But the conditions which will prove so very favorable to one plant, will, in all likelihood, be only moderately beneficial, or may be even positively injurious to other plants, even when closely related to the one benefited. Add to a favorable season an exemption from the attacks of insects, or other animals, and all the conditions of success are complete, and a large crop is the result. But this favorable season is generally followed by unfavorable conditions. Its insect enemies increase in proportion to their facilities for obtaining food, and the consequence is, that the plant becomes again scarce. Last year, the white clover was unusually abundant; every meadow and common was white with its blossoms. This season, the dandelion, *(Dentis-Leonis Taraxacum,)* is equally plenty. We have observed that these plants are most numerous in the vicinity of places where this species bloomed

last season, although their winged seeds will float in the air great distances; and plants are to be found during one season where none could be found the preceding. Seeds will also lie dormant in the soil for many years—sometimes at very small distances from the surface—until peculiarly favorable circumstance call their dormant vital energies into activity.

Insects, of species injurious to vegetation, appear to be governed by analogous laws. Occasionally, for one season, a moth, butterfly, beetle, or other insect, is to be seen in countless numbers, and almost entirely disappears the next.—Sometimes a species becomes gradually abundant, and then in a few years is equally scarce. The rose bug, *(Macrodactylus subsyinosa,)* is a good example of this; and we hope that the wheat fly, *(Cecidomyia tritici,)* may, at no distant day, follow the preceding species in its decrease. This great increase does not depend entirely upon the presence of a large amount of food, nor the decrease upon the absence of sufficient aliment, for the food of the rose bug was as plentiful in 1856 as it was in 1853; but a certain amount of heat and moisture, with a greater or less prevalence of insects that make such species their food, along with the thinning out by birds and other animals, exerts a very great influence. Other causes exist, in all probability, as yet unknown to us, that exert a controling power over the increase and decrease of animals and plants, and these present a wide field for investigation by the philosopher and student of nature. All discoveries of this kind are really beneficial to man, often putting into his hands the power of prevention or multiplication of forms injurious or otherwise to his interests.—*Ohio Farmer.*

LEGISLATIVE AGRICULTURAL MEETING.

The first Legislative Agricultural meeting of the present season was held on Tuesday evening in the hall of the House of Representatives, in this city. We are indebted to the *Journal* for the following report of its proceedings:

About fifty persons were present. The meeting was called to order by Hon. Mr. FELTON, Senator from Worcester county, who called for a nomination of officers to act at the future meetings.

W. J. BUCKMINSTER, of the *Ploughman*, and Mr. BENNETT, of Leominster, were appointed to act as Secretaries, and the following gentlemen to serve as the Executive committee.

Amasa Walker, of North Brookfield, C. L. Flint, Secretary of the Board of Agriculture, Mr. Bushnell, of Templeton, Mr. Morrill, of Fall River, and Mr. Felton, of Brookfield.

Mr. FELTON then stated that His Excellency, Governor BANKS, who was present, had consented to preside at this meeting, and would now take the Chair.

In assuming the chair, Gov. BANKS said he did so without a perfect acquaintance with the business of the evening. He understood that this was initiatory of a series of meetings to be held during the session of the Legislature, to consider the highly important subject of agriculture in its local and national aspects. The contingency of actually standing in need of the staff of life by any considerable portion of our people, had only within a short time been admitted. But the experience of the past year showed that there had been a more general disregard of agriculture than was well for our country and people. It showed that speculative pursuits do not afford the surest means of industrial prosperity; that every innovation was not an improvement, and the original calling of man was the nearest allied to the prosperity and happiness of the people.

In conclusion, Gov. Banks said he doubted not that the proposed series of meetings would prove advantageous to those participating in them, and to the Commonwealth. He pledged his personal aid to this end.

Mr. FLINT, the Secretary of the Board of Agriculture, being called on to suggest some topic to engage the attention of the present meeting suggested: "The duty and importance of the General Government to encourage and develop the agricultural and industrial resources of the country." Mr. Flint alluded to appropriations which had been made by this and several European governments for this purpose.

Mr. BROOKS, of Princeton, being invited to give his views with reference to the subject suggested by Mr. Flint, said he knew no better way of disposing of a portion of the national domain, than in appropriating it to the encouragement of agriculture in the way of premiums, awards, &c.

Mr. TEMPLE, of Framingham, thought it would be wise for the State to select each year some half dozen localities in the State, and offer premiums for the cultivation of particular crops in particular places.

Mr. TOWER, of Lanesboro', said that farmers needed more educated men to lead them into the field of agriculture as a matter of science. The barrenness of our State presented an admirable field for experiment.

Mr. BROOKS, of Princeton, granted that our land was poor; but we could make more from an acre of it than could be made from the same amount in Illinois. This was true with respect to the corn crop, on which we make five dollars more to the acre than the Illinoisans. Our superior markets rendered Massachusetts farmers able to make more, also, in the raising of pork. In short, the speaker could make more at farming in Massachusetts than in Illinois.

Dr. DURFEE, of Fall River, advocated horticulture as an elementary process to awaken an interest in the minds of the young. There was no State in the Union which had carried this branch to the same extent of perfection as Massachusetts. The speaker agreed with Mr. Brooks in his estimate of the fertility of Massachusetts soil. Even Nantucket, if properly cultivated, was no exception. Some of the very best lands of our State were yet untouched, and those stumpy and stony sections were the very lands for Massachusetts farmers to take hold of. The speaker himself had redeemed an acre of land that was formerly supposed to be incapable of supporting a goat.

Hon. Mr. NEWELL spoke of the need of increased knowledge on the part of farmers, and of the proper time to cut the Chinese Sugar Cane so as to secure the greatest amount of saccharine matter.

Mr. HOWARD, of the *Cultivator*, believed that the conducting of experiments, in a proper manner, was one of the best means by which agriculture could be aided.

Remarks were also made by Mr. BUSHNELL, of Templeton, and Mr. BUCKMINSTER.

Mr. FELTON, from the Executive Committee, said that the subject of discussion at the next meeting would be, "New Plants, especially the Chinese Sugar Cane," and that Hon. M. P. WILDER would preside.

At 9 o'clock the meeting adjourned.

For the New England Farmer.

APPLICATION OF GUANO.

A query has often been made whether the beneficial effect of this stimulating fertilizer, is perceptible for more than one, or at most two years. So far as I have witnessed, I think no benefit is perceptible after the second year—and very little after the first year. The effect of guano on the soil is well illustrated by that of strong drink or intoxicating liquor on the person—apparent for a short time only. Not so with well-rotted manure from the barn-yard or pig-pen. This will show itself for half a dozen successive years. My attention to this point was called by the perusal of the well conducted experiments of Gov. Cushman, published in the *Massachusetts Ploughman* of this morning. In one part of his statement he says, no benefit from the guano used was perceptible the second year. In another he leaves the impression that benefit was perceptible after a lapse of four years. Perhaps this modification may arise from the crops to which it was applied. I think Mr. C. was not quite so clear on this point as he usually is. I wish more gentlemen of his stamp would direct their attention to improving the culture of the soil instead of foundering in the quagmires of party politics; by so doing, the community would be greatly benefited. It is by no means certain that guano is worth purchasing, to be applied to our fields, when other varieties of fertilizers are possible to be obtained. My own impression is, that dressings for our fields can be made from the droppings and liquids of the stall, composted with mud from the swamps—at less expense and of more enduring quality than any guano or phosphate that can be procured. ESSEX.

January 16, 1858.

INHALATION.—Dr. Eliotson, a leading English practitioner, having a full acquaintance with all that had been done by inhalation, and after making thorough trial himself, expresses this view. He says: "We sometimes lessen the irritation by making the patient inhale the vapor of various drugs. The agents which have been chiefly tried are, first, a minute quantity of iodine mixed with hydriodate of potassa; and secondly, chlorine. I have seen more mitigation with the chlorine than the iodine, but have never seen a case of phthisis cured by these means, and don't believe a case ever was cured."

For the New England Farmer.

GOLDEN FLESH PUMPKIN.

MR. EDITOR:—About a year ago, I received from the Patent Office, through the kindness of Mr. Sabin, our member of Congress, a paper of seeds of the "Golden Flesh Pumpkin," the seeds coming thereunto from France, as alleged on the paper in which the four seeds were contained. I planted them in my garden alongside of my squashes, making two hills; all the seeds germinated and grew very thrifty for a few days, then the "large black squash bug" ate them all down to the ground except one, on which they left one leaf, before I commenced putting on to my vines a decoction made of hen-manure and water. This application drove the bugs rapidly out of the garden. This one plant commenced a thrifty growth, taking new root at every joint, by which I mean that a new root penetrated the earth wherever a new leaf was formed on the vine, to the depth of from four to six inches, which root was full of small fibrous branches; in short, it is a very hardy grower. It raised for me, on a little more than one rod of ground, five pumpkins of the following weight: 1st, 158 lbs., on exhibition at the Chittenden County Fair, at Burlington, Oct. 5th, 1857; 2d, 127 lbs.; 3d, 123 lbs.; 4th, 112 lbs.; 5th, 90 lbs.; making in the aggregate, 610 lbs. of pumpkin from one rod of ground; this I call "some pumpkins." They are good to eat, made into pies in the ordinary manner of cooking the pumpkin for that purpose. I can't perceive any difference in the taste of them and the common pumpkin. They excited the attention of very many persons while on exhibition at the fair in Burlington, from their extraordinary size, weight and color. They resemble a squash in color, more than a common pumpkin; but their taste settles the question; they are pumpkins, and nothing else.

I have fed them to my cows, enough, at least, to know that they love them equally as well as the other sort, and I think that if a man can raise from 90,000 to 100,000 lbs. of these from one acre of ground without more than ordinary care, and at the same time not impoverish a crop of corn or potatoes, (which can be done,) it is far better than to plant the common variety, and only get from 500 to 600 lbs. of small, green pumpkins. I ought to add, that on the same one rod of ground, and among the pumpkins, I had planted the Webster potato, and that, though small and early, I got therefrom one bushel and a half of potatoes. Herewith I send you some of the pumpkin seed, which I wish you would plant in some nook or corner of your garden next May. Do not let it climb on a fence or bush; pull it off and lay it on the ground, when it will continue taking root according to its nature; but if allowed to climb, the fruit will not come to perfection; it ripens about the middle of October. The seed of them may be had at the agricultural warehouse of Nourse, Mason & Co. next spring, and also of Mr. Doolittle, in Burlington, Vt., as well as with the agricultural warehouses in St. Albans and Middlebury, Vt. A. F. STONE.

Charlotte, Vt., 1857.

REMARKS.—Five seeds came to hand whose, which we intend to plant as requested.

For the New England Farmer.

CROPS AND WEATHER IN MINNESOTA.

MR. EDITOR:—The winter so far has been very mild for this latitude; the weather has been more like autumn than like winter. We have splendid sleighing now, with about six inches of snow. We had our first severe frost the twenty-seventh or twenty-eighth of September. Nearly all the crops were then out of the way of frost.

We raise here the white and yellow dent corn principally, the same as is raised in Ohio, Illinois and Indiana; most of the seed having been brought from those States, and we find no difficulty in its ripening here. I planted my dent corn about the twentieth of May, and I never saw sounder corn than I raised from it; I also planted some eight rowed yellow flint on the fifteenth of June, which got perfectly ripe, and which I cut up before the frost.

I raised last season a small piece of winter wheat from three bushels of seed, which yielded me something over forty bushels of fine plump wheat; it stood on an average from five to six feet in height.

My farm is situated in what is called the big woods, fifty miles south-west from St. Paul, on the Minnesota river. The soil is a rich, black loam, and is from one to three feet deep, and is said to be equal to the best soils of Illinois, by men from that State.

I cannot close this without expressing to you the pleasure I feel in reading the *Farmer*; it has been a constant visitor to me for the last seven years, and I intend it shall continue so as long as I live. C. A. SHERWIN.

Belle Plain, Minnesota, Jan. 17, 1858.

PLOWS, AND PLOWING.

The attention of mechanics, of agricultural and of scientific men, has for several years past been considerably occupied in endeavors to learn whether the operation of plowing cannot be performed in a quicker and cheaper, and at the same time, in a more thorough manner. That attention has been the means of introducing a great variety of plows, of different construction, and of varied capacity for performing the work required of them. Some, after exhausting the means of their patentees, or manufacturers, and taking a large aggregate from farmers who were desirous to avail themselves of every improvement which they thought would prove of practical benefit in their labors, have utterly failed to accomplish the work claimed for them, and are abandoned. Others, possessing some good qualities, while they were deficient in most others which go to make up a perfect plow, have been introduced, and perform their work indifferently, but just well enough to prevent their being rejected and sent off the farm. There is a third class of plows, undoubtedly, which may be made to execute good work, in the hands of skilful workmen, but they are neither so perfect, nor so cheap, as to preclude all hope of devising and constructing another, which shall be cheaper, meet all the practical wants of the farmer better, and more permanently and satisfactorily turn and pulverize his furrows, than any plow now extant.

But we cannot form a correct judgment of a plow, nor of a horse, entirely by their good looks; the latter may have a clear and unblemished-looking eye, but be stone blind, and the former, to an unmathematical critic, may appear to possess all the lines of beauty and utility necessary to perfection in a plow, and yet utterly fail to turn a deep, sufficiently broad, and well-broken furrow.

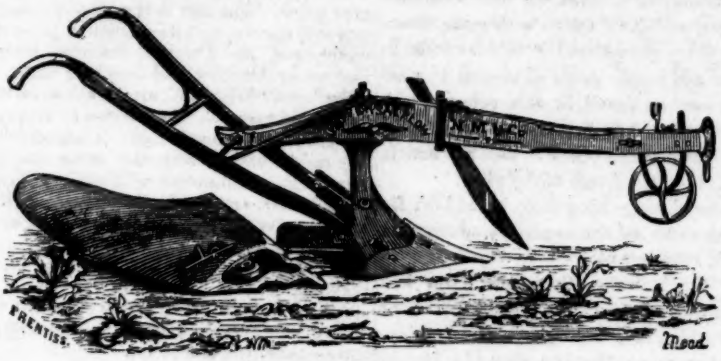
A plow with true proportions, is constructed upon strictly mathematical principles, and this is as necessary to the ease and comfort of the team and prompt despatch of the business, as it is to the execution of the work itself.

The plow being the fundamental implement of agriculture, it has justly received the large share of attention of which we have spoken, and has been the subject of careful consideration by many distinguished minds. For several years, in England, experiments have been made to work it by steam, and they have so far succeeded as to arouse the attention of many leading agriculturists in that country, and to some extent in our own. To be profitable, however, if they are found to work well, we suppose they must be used on extensive lands, and not on freeholds so small as those generally are in New England.

The plows which are represented in the accompanying cuts, possess some peculiarities which are new, and some advantages over all other plows, that have not heretofore been realized. They are the invention of FREDERICK HOLBROOK, Esq., of Brattleboro', Vt., and *have grown gradually out of his own practice in the field*, the only place where a person can consistently decide how a plow should be constructed in order to secure certain desired results. He did not go to work to make a plow, without an accurate knowledge of its importance, and of what is commonly required of such an implement,—but *while plowing, saw the deficiencies of the one in his hands, and corrected them, and so doing again and again, through a series of years, has succeeded in producing* "*The Universal Plow*," which is destined, we think, to meet a want of the farmer that has never before been supplied.

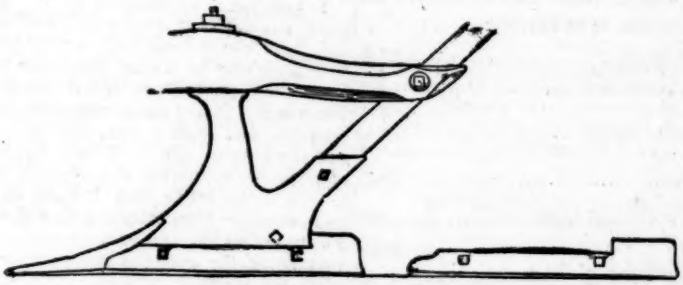
The implement embraces various forms and sizes of mould-board, each nicely fitting one common standard and frame-work—thus adapting the plow to a wide variety of soils and modes of culture. Each mould-board is constructed to perform its respective work in a thorough and finished style.

We introduce on the opposite page two or three forms of the plow, contenting ourselves with



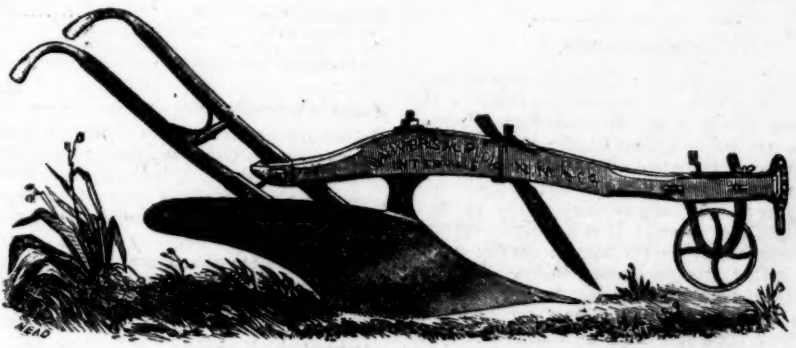
No. 1.—Frame-work of Plow, with Mould-Board detached.

This is a view of the standard, share and frame-work of the *Universal Plow*, with one of the mould-boards lying in the rear. The slots in the standard, just back of the share, receive the locks on the forward end of the mould-board; the button on the mould-board, a little back of and above the locks, enters the socket back of and above the slots in the standard, and a bolt passing through the mould-board and standard at this point, is made fast by a nut on the inner side; another bolt confines the mould-board to the right hand handle of the plow; and thus by means of the two locks and the two bolts the mould-board is held firmly and securely to its place. By loosening the bolts, any mould-board is taken off to give place to any other one of the series. The greatest attainable simplicity has been closely studied in adjusting the parts of this plow, so that the various changes are easily and quickly made.



No. 2.—Outline of Land-side.

This is an outline of the land-side, showing how the sole or shoe piece is attached. It represents a long and short shoe—the former being used with the longest and largest of the Intervale mould-boards, and the latter with the Upland and Stubble. On all plows, the shoe of the land-side is exposed to great friction, and needs renewing long before the mould-board wears away. The shoe is very cheaply renewed on this plow.



No. 3.—Side View of the Plow Rigged.

This is a side view of the plow rigged with one of the Intervale mould-boards, and wheel and cutter, for plowing flat furrows in smooth grass land.

the single remark for the present, that we have delayed speaking of it until we had witnessed its operations, and could speak with some assurance. The plows were tested in various soils, in the presence and in the hands of several as good plowmen as can be found in this country, who all expressed great gratification in the results. This trial we propose to relate in another article with one or two more forms of the plow.

Now, before closing this article, let us look for a moment, at some of the *pecuniary* advantages secured us in this new plow:—

Suppose, for instance, that your farm and modes of culture require *six* different plows, or that you would find advantage in the employment of that variety. Say you want the largest and smallest intervale, medium upland or stony land, medium-lap-furrow, largest stubble, and the sod and subsoil. That would make six plows, and be a fair demonstration of the *economy* of the *Universal Plow* in expense and storage, to say nothing of the quality of work it would do compared with other plows—though in this respect it ranks second it is believed to none. The cost, then, for this one beam and handles and the six mould-boards would be as follows:

Intervale, No. 120, full rigged	$16,00
Mould-board No. 124, light size	1,75
Mould-board, upland, 141, medium	2,50
Lap-furrow, medium $2,00 / Narrow share for do .50	2,50
Mould-board, stubble, 150, large	3,00
Skim plow, to be used with or without stubble, 150	3,00
Total for six plows	$28,75
. hen for bog-meadow, take the wide, steel-edged share extra, to go with large 120 intervale	1,25
	$30,00

These plows, or their equivalent, wooded up separately in the usual way, would cost an average of $10 to $13 each, or in all, $60 to $70! Then, instead of six plows to handle, and find storage for, you have but that one, and the mould-boards, which are so compact as to occupy no valuable room.

STRYCHNINE.

This poison which has of late become so notorious in its abuse, (we cannot say use,) is the most uncertain in its action on the human frame; in some producing instant death; the same dose in others only bringing on tetanic convulsions, and in a lucky few no effect at all; and this does not appear to have any relation to the physical strength of the patient. It is a whitish, crystalline substance, and is extracted from the nut of a tree called strychnos *nux vomica*. This tree grows in Ceylon, is of moderate size, and has thick, shining leaves, with a short, crooked stem. In the fruit season, it is readily recognized by its rich, orange-colored berries, about as large as golden pippins. The rind is smooth and hard, and contains a white pulp, of which many varieties of birds are very fond; within this are flat, round seeds, not an inch in diameter, covered with very beautiful silky hairs, and of an ash grey color. The nut is the deadly poison which was well known, and its medicinal properties well understood by Oriental doctors, long before Europe or America had heard its name. "Dog-killer" and "fish-scale" are translations of two of its Arabic names. The natives of Hindostan often eat it for months, and it becomes a habit, like opium-eating, with the same disastrous results. They commence with taking the eighth of a nut a day, and gradually increase their allowance to an entire nut, which would be about twenty grains. If they eat directly before or after food, no unpleasant effects are produced, but if they neglect this precaution, spasms result. The chemical tests for it are numerous, but only one or two can be relied upon as thoroughly accurate.—*Scientific American.*

For the New England Farmer.

PROFITS OF KEEPING AND RAISING POULTRY.

Many think that an investment in a stock of poultry is rather a poor one. I will, therefore, give an account of the expenses and income of my stock, the past year, (or during the year 1857) as I have kept debt and credit.

I have been accustomed to the keeping of poultry of different species for a number of years, and have never been fully satisfied, until now, that there may be a very handsome profit realized from a stock of poultry, if rightly managed. The variety of my stock comprises the Cochin, Spanish, and Polish hen, the half wild turkey and the Bremen geese. I have kept this kind of geese for a number of years, and prefer them to any other kinds that I know of. Some of their superior properties are that their feathers are purer white, and produce nearly double the quantity of the common kinds; their flesh also being far superior, both in weight and quality. My stock of fowls, January 1, 1857, was as follows:—22 hens, 3 roosters, 3 hen-turkeys, 3 geese, (2 geese and a gander.) I raised 100 chickens, 66 turkeys and 25 goslings from the same.

The amount of capital invested in Fowls	$15,00
" " " for Grain	50,60
	$65,60
The amount of poultry sold	$93,33
The amount made use of in family	6,00
The amount of eggs sold	16,33
The amount of stock on hand	22,00
	$137,66
Balance in favor of the credit	$72,06

In the account there is no credit given for the eggs used by the family in cooking, which would amount to something. Nor the feathers produced by the geese, which would amount to about $6, paying something towards dressing and marketing.

I will just state that I am still keeping debt and credit with my fowls, and my prospects are good. I have now on hand an extra pair of young geese for sale. JOSEPH MACE.

Amherst, N. H., 1858.

REMARKS.—Thank you, sir, these are the facts we all desire to know.

For the New England Farmer.

SPAYING COWS.

MR. EDITOR:—To those who are raising milk, in the vicinity of large towns, it has become a matter of serious inquiry how the various sources of loss, to which they are subject in their business, can be avoided. In very many instances these losses are sufficient to absorb all the profits. These sources of loss, in addition to the diseases to which cows are subject, are chiefly three. 1st, The periodical heats which are natural to cows that are not with calf. It is well known that during these periods the quantity of the milk is diminished and its quality impaired. 2d, The milk of cows with calf, after the fourth month, is deteriorated in quality, and soon begins to diminish in quantity. After the sixth month it is rarely sufficient to pay for the keeping. Many cows become dry soon after the sixth month; and even when they would continue to give milk a few weeks longer, most cows are allowed to go dry after the seventh month, to enable them to bear the draught made upon their constitutional powers by breeding, and to recruit for the subsequent milking. Here, then, is a loss of profit for about one-fourth part of the year. 3d, Many cows lose their calves prematurely. This is a source of loss that seems involved in much mystery. It sometimes exists, apparantly, as an epidemic. A large proportion of the cows in a herd will sometimes be subject to it. It prevails in some seasons more than in others, and sometimes seems to be confined chiefly to certain localities. Sympathy, it is believed, in many instances, has much to do with it. When one cow from any cause has lost her calf, others associated with her will become similarly affected. It has been ascribed to various causes, but the cause or causes are by no means satisfactorily ascertained. In this vicinity it is one of the most serious evils that the milk raisers have to encounter.

One gentleman of my acquaintance has had five cows lose their calves during the past season. Three of them were promising heifers, all of which lost their calves in the pasture. The other two were older, and were kept at home. Another has lost five, and another eight. Many others have lost more or less. Now these cows must be kept another year before coming into milk again. And there must be a loss upon them of at least twenty-five dollars cash, unless they are in a condition to be turned to the butcher. If they are, this is probably the most profitable disposition that can be made of them, for in addition to the cost of keeping them dry nearly a year, they will be more likely to be affected in a similar way again. But it is a disappointment to the milk raiser, who has made his arrangements to obtain his supply of milk from them, and it is often difficult, if not impossible, to supply their places with cows coming in at the time when they are wanted. The farmer who has lost five calves in this way has lost at least $125. Now how can these evils be avoided? Is there any system of management by which they can be prevented?

In some parts of Europe, and especially in the neighborhoods of Paris and Brussels, the milk raisers are adopting the practice of spaying their cows, by which they are enabled to avoid all these sources of loss. They avoid the periodical heats, and the milk remains uniform in quality and quantity through the year. The cows become more quiet and contented, and are more easily kept in good condition. They avoid the loss from the cows going dry one-fourth part of the year, and of course all losses from abortion will be avoided. The most proper time for doing the operation is about six weeks after calving, or as soon as the cow gets well over the effects of calving, and has recovered her strength and vigor, and got weaned from her calf. It is confidently stated that they will continue to give as much milk for two or three and sometimes four years, as they did at the time the operation was performed, and that the milk will be of better quality, and that when they begin to go dry that they will fatten much more easily, and make better beef.

The benefit of this operation will be confined to those who do not raise their cows, but who keep cows for their milk only, as market men and families who keep one or two cows. If the statements which come to us from Europe are true, eight good cows spayed at five or six years old, or when they have reached their full milking age, are worth at least as much as twelve treated in the common way. The operation is easily performed, and we do not learn that it is attended with any special danger. The operation has recently been performed in this town with entire success by a gentleman who is qualified to perform it in a skilful and scientific manner. The subject is worthy the consideration of milk raisers and of families who have a good cow which they would be glad to retain in milk all the year round, and for several successive years.

Concord, Jan. 12, 1858.

For the New England Farmer.

CULTURE OF INDIAN CORN.

MESSRS. EDITORS:—Indian corn is manifestly the most important grain crop raised in New England. Our soil and climate admit of greater improvements in the culture of this crop than any other our fields produce. The corn plant will draw nourishment from almost any kind of manure that can be applied to the soil, and there is very little danger of an excessive application. We can prepare a field for an extraordinary crop of corn, and after that is taken off, the land will be in excellent condition to receive the seed of some other grain or grass. The cultivation of this plant occupies a prominent place in good husbandry. It is a subject of lamentation that it does not command more attention and receive more effectual encouragement. Much less corn is planted, within the circle of the writer's knowledge, now, than thirty years ago. The neglect is painfully felt in a year like this, when it is very difficult to command money to supply the deficiency. Various causes have been in operation to divert attention from the culture of this very useful plant. We think the criticisms on the measurement of corn crops, often made with very little knowledge of the manner in which it is done, and suggestions of the dishonesty of applicants for premiums, have had some influence in the case. In your paper of Dec. 13th, there is mention of a crop of corn raised by the writer

and reported many years ago. "P." says he thought at the time there must have been some "humbugging" in the case; now I suppose this means there was collusion between the supervisor and myself.

Some larger crops have been reported since, against which reports, similar suspicions are expressed. If it be true that the Plymouth County Agricultural Society has always selected unprincipled scamps as their agents, then the censures passed on them may be just; but if the agents have been upright and fair men, their accusers are without excuse. For the rules established by the Society for the measurement of corn are easy to understand, and sufficiently precise and rigid to secure justice among the applicants, and present the public with just views of the experiments.

Some of our reports have been pretty roughly handled by men regarded as holding high rank, as agriculturists; intimations from such men that statements are incredible will soon pass very currently as falsehoods with some of less calibre.

Unless the art of agriculture is to be swallowed up in parade and war, we think the senior editor of the *Ploughman* and the Secretary of the Board of Agriculture may yet live to credit reports of larger crops of corn than they have yet seen. The editor of the *Ploughman*, it is believed, has already relinquished the first opinions expressed by him, that sixty bushels of corn to the acre is an extraordinary crop. No doubt large stories are sometimes told of the amount of crops and products; some years ago, it was said one hundred and seventy bushels of corn had been raised on an acre in the State of New York, and the man expressed belief that he could raise two hundred; all this seems to me less incredible than a statement that four quarts of milk will yield a pound of butter, or that from eighteen to twenty-one pounds of butter per week are made from the milk of a single cow, for a succession of weeks. M. ALLEN.

Pembroke, Mass.

MAINE BOARD OF AGRICULTURE.

We have been favored by the accomplished Secretary of this Board, S. L. GOODALE, Esq., with this neatly printed volume, of more than two hundred pages. It gives evidence of having been prepared with much care and attention, and is in a form to instruct those who carefully examine its pages. They are not made up of loosely drawn reports and extracts, merely to fill a certain space—but seem to be well-digested and continuous, calculated to give a general view of the condition and progress of farm culture throughout the State. This is as the Secretary's report should be—and when it is otherwise, it shows a want of clear comprehension of duty, or a want of ability to perform it. This is the second report of Mr. Secretary Goodale, and it fully sustains the high character of his first report.

In another column a Maine correspondent gives a more lengthened notice and review of the report.

For the New England Farmer.

ABOUT BARNS.

MR. EDITOR:—The following appears in the last issue of your paper:

"I am about to build a barn in addition to two others I now have. I want a cellar for my sheep in winter, and what I wish to know is, can I have stables in an L so as to make it handy, as I do not want the stables in the cellar nor in the barn over the cellar. Any plan or information you or any of your numerous correspondents may give, will be thankfully received by

A SUBSCRIBER."

Upon a New England farm a good barn with a cellar under the whole is as essential as a good house with a cellar under the whole of it. The health and comfort of the domestic animals depend much upon their winter quarters. It is true economy to be liberal to them. A barn should be at least thirty-six feet wide, with twenty feet posts. Forty-two feet wide is a better dimension. The length may be eighty feet, one hundred feet, or longer if needed. Even two hundred feet in length is better than three separate barns. It should have one or more ventilators at the ridge-pole. The cellar should be under the whole of it, the walls should be made of rock pointed with mortar, with brick underpinning two feet high, containing, at suitable distances, small doors eighteen by sixteen inches, for the purpose of light and ventilation. The cellar should be at least eight feet deep, with two rows of brick piers eight feet apart—the whole length of the barn. The entrance to the cellar for teams should be at one end, secured by a tight door. A barn cellar thus made will keep vegetables secure from frost in winter, and will be the proper place to store farming tools, carts, wheels, plows, harrows, &c. In such a cellar any quantity of manure can be made by the mixture of muck, soil, scrapings of streets, leaves and straw, with the solid and liquid manure made by the oxen, cows, sheep and horses housed above. Stables should never be in the cellar, but always above and over it. Hogs may be kept in the cellar to work over the manure. No farmer should forget that his success depends upon the amount of manure he shall annually manufacture. His *fancy fertilizers* should be manufactured by himself, in the cellar of his barn. He should have an under-ground drain from the house to the barn cellar, in which all the soap-suds, washings of the sink and chamber water should be conveyed to the manure heap. In this way neatness about the house and purity of air is preserved.

Sheep should never be wintered in the cellar of a barn. The dampness is injurious to its health. That animal has a natural protection against the cold, and does best in a dry, rather than a warm place.

The interior of a barn may be arranged to suit the fancy, but several things are essential. That the stables be over the cellar. That the arrangement be such that the heads of the cattle be towards the open space, or barn floor, and that a convenient trap-door be had in the barn floor, through which to tip a cart-load of muck at a time. PINE HILL.

January, 1858.

EXTRACTS AND REPLIES.

GAS TAR.

I would like to inquire if there is any virtue, for agricultural purposes, in the substance called *gas tar*, obtained at the gas works, and if so, how it should be applied?

CHARLES A. THEOBALD.

Dresden, Me., 1858.

REMARKS.—We find in the "American Muck Book" the following account of the substance:—"*Gas tar* or *coal tar*, from the amount of ammonia it contains, like all other matter in which ammonia is present, must be rich as a manure, whether diluted with water and applied in a liquid form, or as composted with peat or other absorbent matter.

"As this substance is produced in rather limited quantities, and employed very commonly as a paint for posts, fences, farm buildings, &c., it has not been much used as a fertilizer on account of the expense attending its purchase; but wherever it can be obtained at a small cost, it is an article well worthy of the farmer's notice. It is composed entirely of ingredients which enter into the composition of all plants, is gradually decomposed in the soil, and is powerful in its effects; hence, it is preferable to apply it in a compost made of pulverized peat, swamp or pond muck, loam, mould, or any of the absorbents treated of in other parts of this work. It may be applied as a top-dressing for most kinds of crops of grass, turnips or grain; or it may be employed in the hills or drills of most of our garden vegetables, Indian corn and other hoed crops."

—

HOW TO MAKE AN EXCELLENT CAKE.

One quart of Indian meal, four table-spoonfuls rye meal or flour, half tea cup West India molasses, one tea-spoonful of saleratus, and some salt; stir in warm or cold water till it is nearly as thin as fritters or pancakes. Sweet or sour milk or buttermilk may be used, allowing more saleratus for the sour. Pour it into a tin or iron baking-pan, well greased, and bake in a quick oven.

It is good enough without any spice, but if you are fastidious, and can afford it, you can add caraway seed, allspice or ginger. It is best when first baked, but is good afterwards, cold or steamed. When crumbled in milk, it is particularly relished by children. Try it.

If you should happen to get in too much or not enough saleratus, you can govern yourself accordingly next time.

P. D. & T. S. EDMONDS.

East Chelmsford, Mass., 1858.

—

WHAT CAUSED IT.

I have noticed within a few days, that a thrifty Porter apple tree, about a foot in circumference, has a large crack in its trunk beginning in the crotch and extending through the bark and wood nearly to the ground. I find similar cracks, but none so large, in the trunks of two other trees; the cracks in appearance very are like those produced sometimes in a log, by boring a hole in it, pouring in water and letting it freeze. Some parts of the crevice in the Porter tree were filled with a discolored icicle the morning after a freezing night. The trees stand on a yellow loam of about a foot in depth; the subsoil is a coarse, porous gravel, perhaps with clay underneath, for water is reached by digging six to eight feet.

Jan. 20, 1858. D.

REMARKS.—We have noticed this in our own trees, but always found it in young and thrifty growing ones. Many persons say it is caused by cold. Is it not rather owing to an excessive supply of sap, unable to find an outlet through the natural channel of stems and leaves, and thus swelling the trunk until it is distended to bursting?

—

SUBSOILING WET SOILS.

Is subsoil plowing beneficial on a naturally wet granitic soil? J.

REMARKS.—Certainly, we think. If any naturally wet soil is made porous and light six or eight inches lower than usual, it would allow the water to pass away from the upper portion more readily, and consequently let in the air and heat, and thus materially improve the mechanical condition of the surface soil. Roots of plants would also extend themselves deeper than if the substratum had not been disturbed.

But such soils should first be drained, if possible; then the process of subsoiling will afford ample returns for all its cost.

—

WASH FOR FRUIT TREES.

Make a firm soap of one part lamp oil (no matter how much candied) and six or eight parts of strong ley or potash solution; one part of this soap and eight of warm water—apply with a brush, or cloth attached to a long handle.

I have used this wash with perfect success on young trees, entirely destroying the aphis when the trees were nearly covered with them, and giving to the bark a healthy and vigorous appearance. Apply the wash in February or March.

J.

—

PUMPKINS AMONG CORN.

Will you, or some of your correspondents, give your views of raising pumpkins with corn, as this is a subject I have never seen discussed in your paper? OLD SUBSCRIBER.

Putney, Vt., Jan., 1858.

REMARKS.—It is a common custom in New England to raise pumpkins among corn. It used to be our practice, but we have nearly abandoned it. Whether it is best to cultivate mixed crops of corn and pumpkins, or not, we, certainly, are not able to determine,—but are strongly of the opinion that no gain is made by the introduction of the pumpkin into the cornfield. What do other cultivators think?

PORTABLE GRAIN MILLS.

What kind of portable mill do you consider the best for grinding all kinds of grain for farmers' use, and what is the price?

Chaplin, Jan., 1858. J. S. ROSS.

REMARKS.—In the December number of the monthly *Farmer*, p. 574, may be found some remarks on this subject. The price of mills varies from $35 to $65.

—

ARE GOATS PROFITABLE?

I wish to inquire about goats, whether they are profitable to keep for their milk?

Paxton, 1858. A SUBSCRIBER.

REMARKS.—It depends entirely upon circumstances, whether it is profitable to keep goats for their milk. If the keeping a cow is absolutely precluded, and milk cannot readily be obtained in any other way, it would probably be profitable to keep goats for their milk. It is sweet, nutritive and medicinal, and less apt to curdle on the stomach than that of the cow. When yielding milk a good goat will give, for several months, at the average of two quarts a day. Mr. Pringle, of Kent, England, in an article in the *Gardener's Magazine*, says that two goats are equal to one small Shetland cow. The flesh of the goat is strong and indigestible, and is rarely eaten.

—

A BIG EGG AND QUEER EGG.

I send you a description of a hen's egg that was recently presented to me by Mrs. Monroe, of Burlington; it is a great natural curiosity; it measures in circumference within a fraction of eight inches one way and nine inches the other, and it has inside another egg, with hard shell, perfect in appearance, and about the size of a common hen's egg. PETER WAIT.

Danvers, 1858.

—

WHEN TO FEED MILK COWS.

I wish to know through the *Farmer* at what time cows should be milked to yield the greatest amount? Whether before they are fed, or during the time of feeding (in winter,) or how long after they have fed to the full? P. F.

East Charlemont, 1857.

—

HOW TO RAISE POP CORN.

In answer to your correspondent who inquires about raising pop corn, I would say that there is no mystery about it; the culture is the same as for any other corn; the difficulty is in the kind of soil on which it is raised; that raised on light, warm, sandy soil, being very much the best, while that raised on strong, rich land, is almost worthless for popping. B. F. CUTTER.

Pelham, N. H., 1858.

—

PURE BLACK POLAND FOWLS.

"An Old Subscriber," who inquired some time since where he could find these fowls, is informed that he can procure them of Mr. JAMES M. CHATTERTON, at Centre Rutland, Vt.

For the New England Farmer.

THOROUGH DRAINAGE AND IRRIGATION.

In the first volume of the monthly *New England Farmer*, page 74, may be found the following history and definition of the term Thorough Draining, credited to ROBERT JARDINE:

"Draining, as understood thirty years ago in England, meant merely the making of channels to carry off surface water, and underground drains to dry bogs, or cut off springs. It has now *an entirely different meaning* in the agricultural world. Mr. Smith, of Deanston, near Edinburgh, was among the first to practice and explain Thorough Draining, as it is called. His system is, that *all* land requires to be drained; that *the depth of loam, or soil, containing the food of plants, seldom exceeds a few inches, resting on a subsoil, or pan of clay, or hard gravel, saturated with water.* By making drains from two and a half to five feet in depth, at every twenty or thirty feet, the land becomes dry, air takes the place of water," &c., &c.

Portions of this extract to which I direct the attention of the advocates of Thorough Draining in this country are put in italics.

Here we have the English idea of soil and subsoil. Add to this the humidity of the English climate, and the necessity of the herculean task of making drains "from two and a half to five feet in depth, at every twenty or thirty feet," all over the farm, and the necessity, too, of the enormously thick and heavy hob-nailed shoes which are worn by English laborers, are natural inferences.

But must the English practice of Thorough Draining and hob-nail shoes be followed in the United States? Is draining with tiles "the next great step to be taken in the march of improvement on all our old farms" in New England? Will any one who ever did so much at farming as to dig a hole in the ground in this country, adopt the language of Mr. Smith, which I have put in italic letters, when he draws up a description of the soil and the subsoil through which he penetrated? Or will he infer from the dry sand and the loose gravel which here generally lies from five to fifty feet over any thing "saturated with water," that the American farmer must expend twice the value of his farm to rid himself of the "surplus fluid?" May he not rather adopt the language used by Prof. Nash, in his address before the Hampden Society, in 1854, and say: "The Almighty has done this work so well that the owners need expend nothing with the hope of doing it better?"

The difference between the moisture of both air and soil in this country and England is admitted to be great. An English laborer of my acquaintance, after making his "pile" in this country, returned home with the intention of spending his days with the friends and amid the scenes of his boyhood. In a short time, however, he was back again and at his old tasks in New England. He said that he found he could not stand the climate there. The ground was so damp that it seemed to strike through his shoes as soon as he stepped ashore, and gave him the rheumatism, so that he was sick and lame all the time he was at home.

Prof. Nash, in the address from which I have already quoted, says: "Soils there, from the most clayey, up through the various loams, to the most sandy, are more compact than those which bear the same name among us." There vegetation flourishes best on raised beds, huge hills, or sharp ridges, and the farmer is compelled to guard at every point against the effects of a superabundance of water, as he is taught by experience that moisture is his great enemy.

In this country, as a general rule, it is drought, not moisture, that injures our crops. We know more of the evils of digging from fifty to one hundred feet to find water enough to fill our tea-kettles, than we do of those which attend a 'subsoil of clay, or hard gravel, saturated with water,' but a few inches from the surface. England, therefore, may have too much moisture; we often have too little. The roots of her vegetables may die of dropsy; ours perish by drought. In her heavy soils, manures may waterlog and sink beyond the reach of plants; on our sandy plains and under our tropical sun, they probably "vanish into air." English farms may perhaps need draining; American farms need irrigation.

Our climate and our soil are so materially different from those of England, that we must regard it as a misfortune that our theoretical agriculture comes to us directly from that country. This fact goes far to account for the often lamented unpopularity of book-farming, among us. A large proportion of the volumes in our rapidly increasing agricultural libraries, though published in America, are "founded on" English "facts," if not mere re-prints of books written for the fast-anchored and fog-steeped Isle, where turnips grow, and corn does not.

Whether we read the history, or study the monuments of agricultural industry, of those European countries whose soil and climate is most like our own, we learn that turning water upon the soil, instead of drawing it out, has ever been regarded as the proper way to increase the fertility of the land.

In another article I propose to give some reasons for my opinion that, in the United States, there are twenty acres that would be benefited by irrigation, where there is one that needs draining. S. F.

Winchester, Jan., 1858.

BARLEY.

It is stated that the first barley sown in this country, was upon the island of Martha's Vineyard, in 1602, by a man named Gosnold, who introduced this and other varieties of grain from England into Massachusetts. In 1811, barley was sown as a crop in Virginia, and continued to be cultivated there until the settlers found tobacco more remunerative. In 1626, barley was one of the crops grown upon the farms of Manhattan Island—probably where Trinity Church now stands. In 1849, the barley crop of the United States was 5,167,000 bushels; and according to the increase of the preceding decade, the crop of 1856 would be over seven millions of bushels. It probably even exceeded this. The grain is nearly all consumed in the States where it is grown, principally, we presume, for malting, as the price is too high for feeding to stock.

TREES AND THEIR USES.

The value of the forest tree is beginning to be appreciated not only in a physical but economical point of view, and each new treatise serving to show the necessity which exists for preserving and cultivating trees, is to be welcomed as a contribution to the public weal. An article on this subject in the July number of the *North American Review*, is calculated to disseminate much wholesome truth bearing on the subject. Already the rapid destruction of the forest has been in a measure arrested, partly in consideration of the prospective wants of the railroad and shipbuilder, and the process of restoration has been commenced by re-planting many acres with young trees. After speaking of trees as an ornament, and the many classic memories which they serve to perpetuate, as the "rugged yew-trees" where Gray lies buried, to "Milton's mulberry," and the "Avon willows," the reviewer speaks of trees as productive property, as follows:

"It can be demonstrated that the best use for the larger part of the cleared land of New England would be to plant forests upon it. There is, except in the rich gardens close around the cities, no land so profitable, no land which pays so good an interest on its cost, as wood land. In some parts of Massachusetts a man who owns a hundred acres of pasture is little better than a bankrupt, while he who owns a hundred acres of forest is independently rich. The first must pay taxes on what does not pay for its culture, while the second can cut off enough to meet the annual interest, yet have more at the end than at the beginning. We once heard an eccentric genius maintain that his woodland, about fifty acres in all, though he had bought it and paid for it a good round sum, some thirty years before, had in reality never cost him a cent; 'for,' said he, 'I have cut off wood enough to pay not only the original outlay, but to meet all the worth of the money at compound interest, and to cover all charges, and now I have more wood than I found there at the beginning.' It was rational logic enough.

We are confident that, at the present prices of timber and fuel, the profits of wood-land to our New England farmers are at least three times as great as the profits of the land which they cultivate with so much labor. The experiment of planting locusts on Long Island has proved that lands before considered valueless, may become the most precious possession of their owners. Thousands of acres now lying waste might, with a very small outlay, be made to yield very great returns. The length of time that must pass before the profit of these artificial forests can be tested, undoubtedly deters many from planting them. Very few men like to make an investment of which the returns begin to come only after twenty or thirty years. But every man knows that whatever raises the value of his land is as sure profit as that which actually puts cash into his pocket. There seems to be less promise in an acre of young locusts than in an acre of thriving turnips; but in twenty years the value of all the annual turnips will not begin to reach the value of the trees. The longer the planter is willing to wait, the greater will be his ratio of gain."

It is recommended that on every farm of respectable size there should be a season for the annual

planting of trees. Unlike other crops, they enrich rather than impoverish the soil. Moreover, trees preserve the snow, (the "poor man's manure,") and by breaking the wind, secure a more even covering of snow to the ground. The sudden alternations of freshet and drought are also prevented.

The French government, which has done more than any other in the culture of forests, rather favors this theory, and encourages the separation of kinds, where large returns are expected. In the Department of Landes it has chiefly replanted *pines;* on the slopes of the Pyrennes the *box* is the favorite variety; while in Brittany and Normandy the *linden* abounds. In Scotland the *larch* has been most extensively cultivated; and more than ten thousand acres, with more than fourteen millions of trees, were planted in less than a century, by the single family of Athol. This example has been copied in other parts of Europe, and one is often surprised to find in secluded places, like the region of the Tegernsee, in Southern Bavaria, beautiful artificial forests of larches. In Greece the prepossession seems to have been for plane-trees, and on the hills of Laconia a recent traveller, M. About, has remarked the wanton and wasteful destruction of these noble monuments of the Turkish dominion.

The writer says, "If the rate of disappearance goes on for the next half-century as it has for the last, the child is now living who will see the soil of New England everywhere as bare as the soil of Attica, and its noble rivers shrunken in summer, like Achelous and Cephissous, to shallow brooks."

For the New England Farmer.

POSITION OF APPLE TREES.

MR. EDITOR:—Your suggestions on this topic, as to setting trees by the stone wall, by the borders of the field and by the road-sides, accord entirely with my early lessons. I was born and reared on a farm, where several hundred barrels of cider were made annually, and where the profits of the cider-mill was esteemed better than any four cows kept on the farm. In those days, no one was ashamed to make or drink a little good cider. My father reared on his farm four boys and two girls; the average height of the boys was more than six feet—the average weight of the whole was more than 200 lbs. each; so that we lost very little of the growth that was our due, by the cider that was made on the farm. True, for several years past, I have made very little use of cider; but my father continued to use it, until the day of his death, and apparently with a good relish. For more than eighty years, he was favored with a sound mind in a sound body, and this is enough for any one.

He was of the opinion that one tree, properly placed by the wall or by a large rock in a hollow, was worth half a dozen trees in a row on an open plain. I remember we used to gather the major part of our fruit from such isolated trees; and the fruit they will yield is the chief object for which trees are grown.

January 16, 1858.

THE FIRST APPLE IN NEBRASKA.—Judge J. W. Hall, of this county, has presented us with an apple grown on his farm, five miles north-west from this city. This is the first apple grown in Nemaha county, and for aught we know, in the Territory. It is a beautiful specimen both in appearance and taste; a bright yellow, medium size, and slightly sweet, rich and juicy; was grown upon a tree planted one year ago the past spring. The early production of this tree is evidence of the adaptation of the Nebraska soil to the growth of fruit.—*Ohio Cultivator.*

For the New England Farmer.

MANAGEMENT OF COLTS.

MR. EDITOR:—There is in the December number of your much esteemed journal, an inquiry upon the above subject, by Mr. Gray, followed by your reference of the question to Mr. Vining. His reply I have waited for, and read with interest. I consider it in the main excellent, and the right thing to follow. The one exception that I take is in the matter of grain. I have changed my course in this, within the last ten years. After observing that colts grained during winter, do not thrive so well in the summer—after having one of the best colts I ever owned nearly ruined, by contraction of the fore feet and enlargement of the ankles, gradually brought on, as I could not doubt, by constant, though small allowance of grain, and increased, probably, by being kept a part of the time on a floor—I have dispensed with grain, and feed only with good hay, (early cut, well cured clover is good,) and give once or twice a week a mess of roots, or even apples, for a change, and to keep up the appetite. A colt should not be kept tied, nor should he be blanketed. His stable should be warm enough without. A yard for exercise, as Mr. V. says, is very important. Let there be in it a good supply of water, but no ice for him to slip on, and no sharp points in the fence to injure him, and let him be secured from all cold storms. I have had better results from this than the former course. In this way I raised the mare now owned by Adna Storrs, of Hanover, N. H., which took the first premium at the New Hampshire State fair, at Concord, last fall, as a brood mare, and also the first at the Connecticut River Valley fair, held last October, at Bradford, Vt., in the class of Gifford Morgans.

It seems to me reasonable that a horse kept without grain till the age he is put to service, should have a better constitution; that the owner will then be free to adapt the quality of feed to the severity of labor. Horses, when not at work, should be capable of keeping good flesh, and a smooth coat, without grain. So kept, they will be more healthy, and last longer. This cannot well be done with those that have always depended upon having it. I said a colt should not be tied. Now let me digress a little, and say that a horse kept up to hay, during summer, should not be tied if it can be avoided. I have found with four different ones, thus kept up, great benefit from giving the horse liberty to go into the yard or under the sheds when he pleases, always keeping water to which he can help himself. It amounts to this. The feed that will keep a horse fat and sleek with this freedom, will not keep him from growing poor, tied in a stall, and standing on a floor.

No wonder so many stock horses have unsound feet, when they are thus kept tied, and standing the whole year. A good bed of some kind is quite essential to the comfort of the horse, at any age. I have given this, *not* in the presumption that my deductions are infallible, and shall always hear respectfully the opinions of those whose experience has been greater than mine.

North Thetford, Vt., 1858. H. C. FITCH.

For the New England Farmer.

AGRICULTURAL TRANSACTIONS IN MAINE.

Whoever has travelled through the sea-board counties of the State of Maine, and noted the generally hard features of the soil, must have thought that "farming in Maine is a hard business," and such has been the common saying of her own people these many years. Other people have heard of her large crop of pine trees in former days, and of potatoes, until the advent of the "*rot.*" The statistics of American commerce give her credit for a large annual yield of *shipping*, wherein she excels the world; and in other branches of productive industry, Maine holds a respectable rank.

But who would look to that State, and her thin soil—cold, sterile, reluctant, and when not generously overspread with rocky boulders and cobble stones, sands and gravel alternate with clays whose firm tenacity is a fair emblem of the steady purpose and adhesiveness of the people there dwelling,—who would look to a location and soil like this, as the soil of Maine is generally supposed to be like this, *for an improved and improving agriculture*? Yet there it is to be found in the hands of many clear-headed and hard-handed farmers, who can both try a practical experiment, and write an intelligible description of its method and results; who are not afraid to plow deeper, cultivate more thoroughly, drain wet fields, double and quadruple their manure by composting with leaves, turf, muck, &c., build barn cellars and other shelter for manure, and a few who had the nerve to venture on a systematic rotation of crops, in defiance of all intimations of unknown evils to befal those who thus left the time-honored walks of their forefathers. And these men are beginning to take two or more tons of hay per acre from lands that had not been known to yield one ton per acre in the memory of the present generation of young men, without any increased expenditure of money or labor, by using them in the right direction. Crops are obtained of grain and roots that would compare favorably with those of the most fertile lands in the West or South. This beginning of improvement is like a little leaven in a large measure of meal, but it is gaining, and will leaven the whole lump.

The Legislature of Maine, after several abortive efforts to aid agricultural improvement, two or three years ago provided for the organization of the present Board of Agriculture, which, though limited and restricted in its means and powers, (by that cautious policy which would ascertain if agricultural improvement be a public benefit—if it be wise to prove farming profitable, before enabling it to take efficient action,) has already accomplished a large benefit. Thus authorized, such men as Dr. Holmes, of Winthrop, (Editor of the *Maine Farmer,)* S. L. Goodale, of Saco, the able and thorough going Secretary of the Board, and their associates, have made the best use of the means at command for direct and practical effect.

The first report made last year, and an admirable work of its kind, descriptive of the present state of agriculture, with a brief *resume* of past legislative and associated effort in its behalf, contained so much that was useful and sensible that even the Legislature were driven to approval, with an appropriation (so small as to be a reproach to the State,) for another year. "The Second Annual Report of the Secretary of the Maine Board of Agriculture" is now in press, and we have seen some of the advanced sheets. They are very interesting, and eminently practical, and contain a collection of opinions, details of experiments, plans of improvement, and results obtained in different localities and soils, and in such variety of circumstances, as will afford some useful hint to every one—all from practical farmers in various parts of the State. Blended with these, Mr. Goodale gives his own notes of observation and instruction, whether of science or art, theory or practice, in plain, but forcible terms, and free as possible of mere technical phrases. A good example of this occurs at pp. 127—130, in explaining the importance of shelter to animals, as economy of food, and the identity of food and *fuel* in processes of combustion and evolution of heat. Every branch of the farmer's many interests is considered, and with relation to the climate and other local circumstances, are all the suggestions applied.

But the most interesting portion of this work to general readers and young farmers, is its description of the Aroostook Valley and vicinity, visited and examined by Mr. Goodale last summer. This extensive region, far in the interior and almost on the frontier of Maine—but little more than a wilderness, with few inhabitants, is represented as having a deep, rich soil, not excelled in fertility by any land in the West, and a climate of great salubrity, where pulmonary disease is unknown, and though so far north, having seasons long enough to mature the common grain and root crops grown in other parts of the State.

I cannot ask space to say much more of this part of the report, but heartily commend it to the farmers of Maine, every one of whom should have a copy of the report entire. Let them look well at the land in Aroostook, obtainable at a nominal price, near home, where there is no fever and ague, with a market for all that they ought to sell, close at hand, and contrast it with land in the West, where at the present hour, the value of wheat is not enough to pay its transportation to market on the seaboard. For the benefit of invalids, and those who delight in many children, we quote the following in favor of the Aroostook climate.

"In the report (Surgeon's) from Fort Kent are mentioned numerous facts going to show both the longevity of individuals, and the rapid natural increase of population. For instance, six families living within the space of a mile had *one hundred and six* children in all. Twelve other families had ninety-three children, in an aggregate married life of one hundred and sixty-two

years, averaging a birth every twenty months in each family. One settler had nineteen children in eighteen years; another at the age of fifty-nine, had twenty; another had twenty-six, the mother being fifty-three years old. Many other facts are cited, showing that whatever the cold of winter or other peculiarities of climate, there is nothing to preclude the highest conditions of health and longevity."

Let the people and Legislators of Maine heed the councils of such men as their former land agent, Hon. E. L. Hamlin, in favor of opening this region of great natural wealth to communication with the seaports, and let farmers everywhere be encouraged by the evidence in Mr. Goodale's report that farming can be made profitable in Maine, for they would be inexcusable, who would fail in it any where else, while boasting of greater natural advantages.

Dec. 31. Folly Farm.

For the New England Farmer.

LITTLE THINGS,

Or, a Walk in My Garden....No. 13.

Perhaps there is no one thing in which mankind so generally and so frequently make a mistake as in the neglect of little things. Let us look first at

THE SCHOOL BOY.

He makes his first mistake in supposing that it is of no importance if he is heedless about his spelling, his hand-writing and his reading. If he plays truant it is of little moment to him. But if he persists in neglecting these apparently little things, he will certainly grow up to be a bungler in great things. I have seen a boy spurn with contempt a subject proposed for composition, as for example, *a bee*, regarding it altogether beneath his attention. But Baron Cuvier, one of the most learned men the world ever saw, attributed his whole success as a scientific man to the study of insects. Sir Walter Scott, who is known to every literary person, at least, acquired his success by his attention to little things. Suppose he was visiting the ruins of some abbey, with pencil and note-book in hand, he would note down every insect, plant, rock or tree that he saw, and then interweave them all into his next book, to be read with interest by those who despise little things.

Every man in active life must attend to little things. Carry a check for a thousand dollars into a bank and the cashier would attend to the little circumstance of your signing your name on its back. It is a little thing of itself, but neglected it would soon ruin a bank. The sea captain must attend to little things or his ship will be wrecked. But it is

THE FARMER'S BOY

Who should learn this habit. A little hole in a fence may cause your whole garden to be destroyed. A little hole in a fence rarely ever grows smaller of itself; so a little duty neglected rarely ever passes unnoted, but results in some trouble. A little attention to that young cow will make her gentle. Much of a farmer's income is made up of little things, and he who does not attach importance to these little rills of profit will never enjoy a large stream as the result of their flowing together. A man may be stingy and mean, but this has nothing to do with strict economy in the use of time and money.

Having penned these thoughts which passed through my mind while tying up some little trees to stakes to prevent their being broken down by the snow, I remain as little as ever,

Bethel, Me., January 1, 1858. N. T. T.

BETHEL FARMER'S CLUB.

Officers.—N. T. True, M. D., President; D. F. Brown, Vice President; A. L. Burbank, Secretary; J. A. Twitchell, Treasurer and Librarian; Z. Thompson, G. Chapman, D. F. Brown, Com. on Subjects.

For the New England Farmer.

DUTIES OF CATTLE SHOW COMMITTEES.

Mr. Editor:—I have glanced my eye over your fair sheet, (No. 2 of Vol XII.,) just come to hand, and am pleased to find the doings of my own county so handsomely noticed by you. While conscious that we omit many things that ought to be done, we feel proud of some things that we have done. As a general thing, I think our committees have felt more fully the importance of the duties entrusted to them, and the responsibility attached to their reports, than is felt in most societies. In truth the committees are the almoners of the bounty of the commonwealth, when acting in this capacity, and as much in honor bound to discharge their duty with good fidelity, as though ten times as much were entrusted to their awards. Suppose they should at hap-hazard, with no intelligent views of what they were doing, recommend an implement as worthy the confidence of the farming community—which really was of no value—and in consequence of such recommendation many of their neighbors should purchase such implements, would they not be putting forward false pretences? I think they would. It is not enough for them to say they intended right, and did the best they could. They should first be careful to know what is right, and then vigilant to do it, and nothing different.

South Danvers, Jan., 1858.

For the New England Farmer.

THEN AND NOW.

Mr. Editor:—Several years since while travelling from Springfield to Boston, I made the acquaintance of a gentleman (all but his name) who had for many years been engaged in the cotton manufactories at Palmer. I asked him if he had not, during his connection with the business, witnessed a great improvement in the manufacture of cotton. "Yes," he replied, "but no greater than I have seen in human nature in general." To prove his assertion he gave me two short chapters of his observations, which I take the liberty to quote.

"When I came here, now more than forty years ago, we spun our yarns at the factory and people came from the towns around and took them home and wove them. After I had been here a little while I was sent into some of these towns to look

up cloth that had not been returned. I went through a part of Enfield, Pelham, Amherst and Belchertown. Their farming and living was of the meanest sort. The mowing fields were full of bushes. The fences were poor. The houses were small, unpainted and open. Back of the house stood a hay-stack, with a few poor cattle eating into it at the risk of being buried up. Right by the door was half a load of green wood, the axe standing in a log that the owner was too lazy to split. Sitting in the chimney corner within, you would find a man with his face burnt up with cider brandy, and about the house a poor, discouraged looking woman, with a few half-naked children. The school-houses are like the dwelling-houses, hardly fit for the cattle. As to the people I wanted to see, no one could tell anything about them. They had died, run away, disappeared nobody knew where. I went on a fool's errand.

"This was *forty years ago.* I did not go over the ground again till last year, when I went to buy timber for our new mill. It was another country. The bushes were out of the fields, the hay-stacks were covered by good barns. Nice painted houses stood where the old hovels stood before. The brandy drinkers, too, had died off, and the women and children, with their bright looks and neat, comfortable dresses, had no resemblance to the poor creatures I saw there before. I can show you a bill in which I am charged fifty cents for cotton cloth not so good as we make now for six, but I tell you, Sir, human nature has gone ahead in the last fifty years more than cotton machinery. It's mind, wideawake, that makes progress. We have improved our machines now, but we shall improve them more. *For every man's noddle now-a-days is on the think.*"

To those who mourn the lateness of their advent, and sigh for the past, I commend the above. It will aid them in forming another brilliant period about the dear old times. To others it may furnish the occasion of thankfulness for their happier lot, and an encouragement to still further improvement. X.

CANDY AND POISON.

A paper on "Colored Confectionary" was recently read before the British Association, from which we condense some valuable and novel information. We learn that, for economy's sake, confectioners, in coloring candies, &c., have recourse for their greens to Brunswick green, carbonate of copper, or arsenite of copper; for the yellows, to chromate of lead or gamboge; for their reds, to red lead, vermilion, or cinnabar; and for their whites, to white lead. These are only a few of the pernicious coloring agents used, and they are among the deadliest poisons. The way in which these poisons are laid on also deserves a word of passing remark. In some instances a very thin coating of the coloring matter is used, so as to spread over a very large surface a small portion of the material used; but in other cases the very reverse is the fact, and in one instance a quantity of arsenite of copper sufficient to destroy the life of a healthy adult was procured from a piece of ornamental table confectionary, not the size of a sugar almond. Confectioners have no reason to use these poisons, for there are harmless vegetable colors enough to answer their purposes. Among these are—for yellows, saffron, tumeric, French berries, quercitron bark, fustic-wood, and lakes of the last four colors. Reds—cochineal, lake ditto, including carmine, Brazil wood, madder, and lakes of the last two colors. Purples—madder purple, logwood and indigo, any of the lakes with indigo or litmus. Blues—litmus and indigo. Greens—sap green *(ramnus catharticus,)* mixtures of any of the vegetable yellows or lakes with indigo, including Persian berries and indigo. Nor would the products of their arts suffer in their attractive appearance by the employment of such colors. We most strongly advise every one who values his health, and perhaps his life, as matters are at present constituted, sedulously to avoid partaking of articles of confectionary exhibiting either blue or green, but especially of such as are green, these latter being but too frequently of a most deadly poisonous nature.—*Am. Druggist's Circular.*

For the New England Farmer.

WASTE NOT, WANT NOT.

Mr. H., of B., New Jersey, with a family of four adult persons, and with the intention of being strictly economical, deems it necessary to consume eight pounds of Havana sugar and one or two pounds of grained sugar a week, beside a good deal of molasses and a little honey and syrup. The aggregate is equivalent to at least five hundred pounds of sugar a year.

Mr. A., of J., in New Jersey, in a family of ten persons, several of whom are mere children, uses nine pounds of Havana sugar and one pound of loaf sugar, besides much molasses and syrup, every week. This is equal to the consumption of something more than five hundred pounds of sugar, yearly.

Mr. H., of ———, in the State of New York, consumes, in a family of little more the average size and number, from four hundred to seven hundred pounds of maple sugar yearly, besides some molasses and honey, and a small quantity of sugar from Havana.

Mrs. J. C., of E., in Massachusetts, in a company of about twenty persons, partly boarders and partly her own children, uses seventy-four pounds of sugar a month, besides several gallons of syrup and molasses; equal, it is believed, to about one thousand pounds of sugar yearly.

Now, reader, is not here a tremendous waste? In the first place, it is a waste of vital energy; for sugar is almost wholly carbon, and the terrible conflagration it causes in the lungs, exhausts, prematurely, the vital energies of the system and thus wastes the precious stock which God has assigned us, of health and life. But, secondly, it is a waste of property; for most of our food is sweet enough, without any addition of saccharine substance. Some of the articles which come to our tables contain from four to eight per cent. of saccharine matter; so that he who consumes six or eight pounds of food of various kinds a day receives from four to six ounces of sugar at the same time. And who that is not wiser than He who formed him and appointed him his daily food shall say that from a quarter of a pound to

a pound of sugar a day is not sufficient for nature's best purposes?

It is no trifling tax to pay fifty dollars a year for sugar, in a family of little more than ordinary dimensions. Yet many do it; and many more expend in this way from one-half to three-fourths that sum. Why, twenty-five dollars only, or one-half the maximum of this waste, would buy three barrels of the best wheat flour, which would make about eight hundred pounds of good bread, or more than two pounds to a family daily for the whole year; or it would give twelve hundred pounds of Indian meal; or some four or five pounds of Indian bread daily for the same time. Is there then, in the use of what as Christian economists we may justly call extra sugar, no waste? Is there no practical disregard of the injunction, "Waste not, want not?" And to people who waste thus, is the discipline of hard times unnecessary?

W. A. A.

For the New England Farmer.

UNDERDRAINING.

MR. EDITOR:—Enclosed is two dollars to pay for the *Farmer* another year. I am much pleased and instructed with it, because I get the experience of so many of my brother farmers upon agricultural improvements. I am glad to see the subject of underdraining is beginning to be discussed in the *Farmer*. From the little imperfect experience that I have had, I feel satisfied that it will prove one of the greatest improvements that can be made in New England. I think it would be much better for those who have any spare income, to spend it in underdraining than it is to purchase more land. I feel satisfied that a great deal of land, that is now cultivated with great difficulty because it is so late in the season before it can be worked upon, might by proper underdraining be made to produce double the amount that is now obtained; beside having the convenience of working upon it early in the season without any fear of being injured by drought—for land that needs underdraining, if properly plowed, will seldom be affected by drought. I hope to see more upon this important subject from the pens of those who are better acquainted with it than the writer of this article.

THOMAS HASKELL.

Gloucester, January 1, 1858.

STOP IN TIME.

Young man, you who take your glass of grog, because it is fashionable, accept a friendly warning of your danger and stop in time. The custom is fraught with danger, and so sure as you persist in it, so sure will you become a slave to the bottle. You may think there is no danger of this—that you are so strong within yourself that you can stop at any point upon the road to ruin and retrace your steps with ease. Deluded man, you may see your error when it is too late; for there is a point upon the dangerous road from beyond which few have ever returned, and these few have performed the feat with almost superhuman struggles. You can break the habit *now*—its fetters are not rivetted as yet, and now is the time to break loose from a custom which will inevitably ruin you if you persist in its practice. You are strong enough now to stop, and you peril your life and your soul by risking the gathering danger any longer. Your helpless weakness will come upon you in an hour when you least expect it. You will be in the midst of a debauching revel, and then gaunt danger will suddenly stand out before you, and you will then feel your helplessness and want of power to grapple with a curse the most afflictive that ever scourged humanity. Stop in time.—*Spirit of the Age.*

THE PREACHING OF THE TREES.

At midnight hour, when silence reigns,
Through all the woodland spaces,
Begin the bushes and the trees
To wave and whisper in the breeze,
All talking in their places.

The Rose-bush flames with looks of joy,
And perfume breathes in glowing;
"A Rose's life is quickly past!
Then let me while my time shall last,
Be richly, gaily blowing!"

The Aspen whispers, "Sunken day!
Not me thy glare deceiveth!
Thy sunbeam is a deadly dart,
That quivers in the Rose's heart—
My shuddering soul it grieveth!"

The slender Poplar speaks and seems
To stretch her green hands higher;
"Up yonder life's pure river flows,
So sweetly murmurs, brightly glows,
To that I still aspire!"

The Willow looks to earth and speaks:
"My arm to fold thee yearneth;
I let my hair float down to thee;
Entwine therein thy flowers for me;
As mother, child adorneth!"

And next the wealthy Plum tree sighs:
"Alas! my treasure crush me!
This load with which my shoulders groan
Take off—it is not mine alone,
By robbing, you refresh me!"

The Fir tree speaks in cheerful mood:
"A blossom bore I never;
But steadfastness is all my store;
In Summer's heat, in Winter's roar,
I keep my green forever!"

The proud and lofty Oak tree speaks:
"God's thunderbolt confounds me!
And yet no storm can bow me down,
Strength is my stem and strength my crown;
Ye weak ones, gather round me!"

The Ivy vine kept close to him,
Her tendrils round him flinging;
"He who no strength has of his own,
Or loves not well to stand alone,
May to a friend be clinging."

Much else, not half forgot, they said;
And still to me came creeping,
Low-whispered words, upon the air,
While by the grave alone stood there
The Cypress mutely weeping.

O! might they reach one human heart,
These tender accents creeping!
What wonder if they do not teach?
The trees by starlight only preach,
When we must needs be sleeping.

Tennessee Farmer and Mec

LETTER FROM MR. BROWN.

Washington, Jan. 21, 1858.

MY DEAR SIR:—In my last letter I closed a brief account of the transactions of the U. S. Agricultural Society, spoke of the Aquarium at Smithsonian Institute, and had a word upon general matters. Since then I have visited most of the public buildings and grounds in the city, looked in several times upon both branches of Congress, exchanged civilities with many old acquaintances, and have found every where something to interest and instruct.

The general appearance of the city has been very much improved since my visit to it in 1856. A new style of architecture has been introduced in the construction of dwellings, which greatly relieves the eye from the monotony of high, unornamental brick walls which were every where peering to the clouds. A large number of the streets are also lined with fine trees for shade, such as the maple, elm and ailanthus, which will soon afford protection from hot suns, and be highly ornamental to the wide and glaring sidewalks and streets. During the administration of Major B. B. FRENCH, as Commissioner of Public Buildings and Grounds, he caused several thousand shade trees to be planted, which are now greatly improving the appearance of the city, as well as having a highly salutary effect in a sanitary point of view.

The *General Post Office* building, which is constructed of white marble, has been nearly doubled in size since the first part of it was erected, and is a noble structure. The *Patent Office* has also been greatly enlarged, occupies a whole square, and is the most magnificent of all the public buildings, with the exception of the Capitol. The *Treasury Department* has been largely extended, and when finished will present the longest and most imposing colonnade to be found in the world. These buildings are all in the process of completion, affording employment for a large number of men, using vast quantities of raw and manufactured material, especially iron, and making a quick and excellent home market for all the products of the farms in that region. Judging from the appearance of the workmen as I passed them, I should think a large portion of them were foreigners; those engaged on the coarser work, such as excavating, removing stone, lumber or iron, being Irishmen, while those occupied as stone-cutters or sculptors, were Germans, and the painters, or at least those engaged in the fresco painting, were Italians.

But the building which most attracts the attention of all, is the Capitol, as its magnitude and high position give it a prominence over all others—indeed over every thing else. It is constructed of white marble, a large portion of which is brought, I understand, from quarries in the town of Lee, Mass. The new wings are covered in, the roofs being iron and cement with plates of glass three-eighths of an inch thick. These plates are of sufficient strength for workmen to travel over in any direction, but were readily broken to atoms by the terrific hail-storm which occurred in Washington last summer, accompanied by thunder and lightning, so that "fire and hail actually ran along upon the ground!" Thousands of panes of glass were broken and the gardens and crops torn to pieces and scattered abroad wherever the storm passed. The hail stones were as large as common-sized hens' eggs, and fell with tremendous force. It was represented to us as a terrific scene. Where blinds were not closed there were showers of broken glass as well as hail, and it was found difficult to close those that were open, the blows of the stones were so rapid and heavy. All animals sought shelter; fowls fluttered in wild confusion—horses broke from their fastenings, and cattle ran bellowing from their pastures in paroxysms of pain and fright. In the glass houses at the *Botanical Garden*, and the green houses of the city there were scarcely any whole panes left, while the plants were sadly broken and riddled and scattered about.

The grounds now enclosed around the Capitol have an area of about thirty acres, and are pleasantly laid out and planted with a great variety of trees and shrubs, while plats of various shapes are filled with a variety of flowers blooming in succession from February until November or December. Some of the fine maples, American or English elms, and a few sycamore or button wood trees, have already attained such a size as to obstruct the view of the magnificent building itself, and already need a judicious thinning and pruning. It is now in contemplation to enlarge these grounds to more than double their original size, and I understand that a committee of both branches have agreed to make such a report. Such an enlargement of the grounds becomes necessary since the extension of the building, as the wings now extend north and south, to the very sidewalks of Pennsylvania Avenue itself. It is the intention to increase the space on all sides of the present grounds, and thus bring them into proportion with the grandeur and magnificence of the structure to which they must always be the beautiful and appropriate surroundings.

The Capitol is a miniature world, and a world of wonder, too. Its length is 740 feet, and its width 270, and covers, including its terraces, which enclose a series of rooms, some five or six acres of land. The new dome now in process of construction will surpass in grandeur, in beauty of conception, in style and magnificence, any

thing of the kind on this continent, and perhaps not excelled by any similar structure in the world. It will rise 300 feet from the base, and 230 feet from the top of the building, and will be surmounted by a colossal figure representing the Genius of America, designed by Crawford. The pediments in the extensions are also to be filled with colossal statuary, much of which is already cut and ready to occupy its place.

Many of the rooms are finished and painted in fresco with exquisite taste and beauty. The colors are brilliant, and are not placed on the surface merely, but are imbedded *through the entire thickness of the mortar*, so that if a fourth of an inch of the plastering were scraped off, the painting would still remain. The designs upon the walls are emblematical, or illustrative of the business of the committee which occupies the room. In the room of the committee on *agriculture*, for instance, Cincinnatus, and his oxen, men and plow are represented as at work in the field, and at the opposite end of the room Gen. Putnam with his hands are figured as engaged in rural labor,—while all the ceiling glows with the ripened harvest, with golden grain and luscious fruits. In the room of *naval affairs*, the engines of war, and in that of *commerce*, bales of goods, views of distant lands, or fine models of merchant ships, with their spreading sails whitening every sea.

The floors in the passages are constructed of a material made of ground flint and clay, baked very hard, aud are inlaid with various colors. The blocks are three-quarters of an inch thick, cut into various shapes, and laid so as to form a mosaic or tesselated pavement, which is very bright and beautiful. The roofs are cast iron, and to prevent an outward pressure of the walls by the expansion of the iron in hot weather, the ends of the rafters rest on a series of rollers on the top of the walls, so that as they expand, they roll out, and return as they cool and contract.

The new Hall of the House of Representatives is vast and magnificent; the ceiling is stained glass, 35 feet from the floor, and above this, the glass roof admits the light, which streams down and kindles the rich painting and gilding into a soft and delightful glow. The chamber is lighted from above, is in the centre of the new south wing, and is entirely excluded from all external objects and sounds. In its walls around the room are 18 panels to be painted in fresco, one of which only is now filled. Galleries extend around the room, back of which are many niches yet to be filled with statuary. Between the Hall and the outsides of the building are corridors, rooms with tesselated pavements, for hats and coats of the members, or clerks, or committees, or retiring rooms.

Some writers have commented with free pens upon the design and finish of this room, as being constructed adversely to the principles of acoustics, ornamented in a tawdry and whimsical manner, and without the exercise of a just and refined taste. It seems to me that these objections are somewhat captious, and at least not well-founded On entering the Hall for the first time, I felt a gush of pleasure for which I was not prepared, because impressions to the contrary had been previously received. There was a soft and pleasant light, but no glare; the air was warm, but pure and elastic, and, save what noise was attendant upon the business of the session, the bustle of the busy world had no admission there. There is much gilding and bright colors in painting, I admit, but these seem necessary to give a cheerful aspect to a room so secluded from the direct solar light. The finish is gorgeous, but not tawdry or whimsical. In the original design by WALTER, this room extended to the outer walls, but was revised by Capt. H. C. MEIGS, of the corps of Engineers, who is in charge of the extension of the Capitol, the Post-office building and the construction of the Washington Aqueduct. One of the charges urged against the Representatives' Chamber is, that little can be heard on the floor or in the galleries when a member is speaking; but this cannot be the fault of the room, for on the Sabbath, when the passions are hushed, and the services of the place are conducted "decently and in order," the faint voice of the preacher can be distinctly heard in every part. When the distinguished Virginian, ANDREW STEVENSON, was Speaker of the House, there was a proposition to alter the Hall, and several members called upon him to inquire, if it were possible to remedy the difficulty in hearing? He promptly replied, "*certainly, let every member behave like a gentleman! and there will be no difficulty.*" And this *is all* that is necessary. If there were *no desks in the Hall, no franking of documents, no letter writing, no conversation, and no reading of newspapers*, there would be no difficulty in hearing the speeches of members, and the business of the session would be done in about half the time usually occupied heretofore. Capt. MEIGS did not undertake to construct a room where a man's voice could be heard despite the scratching of hundreds of pens, the rattling and cracking of hot political newspapers, the rushing of pages and the tumbling of huge tomes into wooden boxes! As well might the House assemble on the sea-shore, and ask that remorseless element to be still, as to transact business comfortably under the existing circumstances in that Babel of confusion, the House of Representatives of the United States. I am inclined to the opinion that Capt. MEIGS has achieved a com-

plete success, and that not only this room, but the skill with which he has projected, and is executing his plans, redound to his fame as an Engineer of no common order. He is a gentleman of commanding personal appearance, of great urbanity of manner, quick to comprehend and suggest, and an able and faithful public officer.

The *Library of Congress* is on the west front of the capitol, from the piazza of which there is a commanding view of the cities of Georgetown and Alexandria, and a long reach of the Potomac river and valley, and the forests that skirt the western shore, as far as the eye can reach. Large additions are annually made to the Library, and since its destruction by fire a few years since, it has been rebuilt with considerable splendor, and highly finished in every part. Mr. MEEHAN, Librarian, and his Assistant, CHARLES W. HINMAN, Esq., are entitled to my thanks, for kind personal attentions during my perambulations over the Capitol.

In the process of constructing this massive pile, I was informed that every stone that is laid into the face of the walls is sketched upon paper before it is cut, thus giving the workman an accurate idea of what he is to bring out of it.—Every part of the outside of the work is also photographed as the work progresses, so that the appearances of the building in its different stages are all preserved, and, perhaps, may hereafter be published. Mr. ——— WOOD conducts the operations of this beautiful art, and it will afford me sincere pleasure to reciprocate his kind attentions whenever he may visit our city of notions.

Delegations of the *Pawnee* and *Sioux* tribes of Indians are here, and are large, well-formed and fine-looking men. They are dressed in blankets with broad red stripes, their faces painted in Indian Chief style, and their heads decorated with the feathers of various birds. Their chins are as innocent of beard as that of a woman, but their countenances betoken energy and a stern will. They are treated with marked attention by the government, and everything is done to impress upon their minds the power of the pale faces whose guests they are.

The government *Botanical Garden* is situated west of the Capitol and immediately across the Avenue from the Capitol grounds. It is neither large nor extraordinary in any respect, otherwise than as containing a collection of the plants brought by Commodore PERRY in the Japan expedition. These, of course, are new to our people, and are therefore interesting. Among the plants there I saw the *cinnamon* and *bread fruit trees*, the *India rubber* and *palm trees*, the *guava tree*, from the fruit of which the excellent jelly of commerce is made, several species of pines unlike any of ours, the *rose wood tree* and the *tea plant*, some of the latter being in blossom. The plants, grounds, &c., are in the care of Mr. WILLIAM R. SMITH, a gentleman educated in the Kew gardens, in England, and to whom I am indebted for kind attentions.

I shall leave here to-morrow and after spending a few days in New York, be at my post again, as usual. Very truly yours,

Joel Nourse, Esq., Boston. SIMON BROWN.

For the New England Farmer.

WINTER BUTTER AND DR. ALCOTT.

MR. EDITOR:—I saw an article in the *Farmer* of Jan. 2d, from the pen of Mr. Silas Brown, in regard to making winter butter. Allow me to add a word of my experience. He says, "we set the pans on the stove or some other hot place." Now I much prefer to place them over a kettle of boiling water, as then there is no danger of burning the milk or melting the pan, which is frequently done when set on the stove, unless great care is used. In regard to churning as often in winter as in summer, I think those who have but a small dairy, say but one cow, would find it quite impracticable, as they would often find themselves minus the cream. My plan is, when I gather cream but slowly, to set it where it will freeze and keep so, till I get enough for a good churning, then thaw it gradually and bring it to the right temperature; to it may be added carrot juice if you choose. I do not think that freezing the cream after it has once been scalded, detracts one iota from its goodness or adds in the least to the labor of churning.

After all, if we would only take Dr. Alcott's advice in another column, we might save ourselves all this labor and trouble. I think we women ought to go down on our knees to thank him for his efforts in striving to lighten our burdens—and yet, when I eat bread and milk with a knife and fork, I always want either the cream or a little sprinkling of sugar added, and a hasty pudding made of corn or rye meal, and boiled rice, occasionally, by way of variety.

Gardner, Mass., 1858. Mrs. H. BARLOW.

HORN AIL—HOLLOW HORN.

There is no such thing. This is our settled belief; or at most it is merely an incorrect name for some ailment, which has no more to do with the horns than with other parts of the body not particularly diseased. The horns are at the base exceedingly thin as we all know, they are very good conductors of heat, and they cover a bone, the pith, which with its integuments is exceedingly vascular, as is evinced when a horn is broken and the blood-vessels ruptured, the flow of blood is vastly greater than when any other bone is broken or bruised. Hence it is that by feeling of the horns it is easy to ascertain the general temperature of the animal—if it is feverish and heated the horns are hot, if debilitated its energies in a measure prostrated, the horns will not be so warm as usual. Standard writers on veterinary practice either deny the existence of the disease or say not a word about it.

CULTURE OF THE GRAPE.

The Grape conspicuous among Vegetable Productions—Quickness of Growth—Great Age—Its exemption from Blight and other Diseases—Type of Plenty—Position for Borders—Pruning—Manures for—General Cultivation—Mode of Keeping.

The idea long prevailed that the grape could only be cultivated by a few persons, enjoying the most favored localities, and who had given the subject long and careful attention; that there was some *mystery* about it which could not be fathomed by the common farmer or gardener. Happily, that idea has nearly, but not quite, lost its force, and large numbers of persons are availing themselves of the benefits which the vine and its products confer upon the people. This good work has been accomplished, mainly, through *the practical treatises of the culture of the vine*, which have from time to time been laid before the public. The perusal of these treatises took away that *mysterious air* which so long enveloped the subject, and led so many to a trial, that thousands are now seeking for some plain, practical rules for planting and tending the vine, and for preserving the fruit. These treatises may be purchased for 50 cents to $1,00 each, and any one of them would be of service to a person who intends to cultivate but a single vine. Clement Hoare, J. Fiske Allen, Charles Reemelin and Robert Buchanan have each prepared a work of sufficient clearness to enable any one to take up the matter understandingly, and to prosecute it successfully.

The first mentioned writer states that "of all the vegetable productions of the world which the skill and ingenuity of man have rendered conducive to his comfort and to the enlargement of the sphere of his enjoyments, and of the increase of his pleasurable gratification, the vine stands forward as the most pre-eminently conspicuous. Its quickness of growth, the great age to which it will live,—so great, indeed, as to be unknown; its almost total exemption from all those adverse contingencies which blight and diminish the produce of other fruit-bearing trees; its wonderful fertility, and its delicious fruit, applicable to so many purposes, and agreeable to all palates, in all its varied shapes,—combine to make it out as one of the greatest blessings bestowed by Providence to promote the comforts and enjoyments of the human race." It has been mentioned by most of the old writers, and strikes us with equal force now, as the type of plenty and the symbol of happiness, when we see its beautiful vines creeping over lattice-work, or its tempting clusters shining on the autumnal sun.

Some fine grape may undoubtedly be found that is sufficiently hardy to ripen in our most northerly States; but if this is not so, their seeds should be sown in large numbers through a series of years, until some one will be produced conforming to the climate in which it grew. It is believed, however, that the Concord, Diana, Delaware, Rebecca, Union, and some others, will ripen in any of the northen States in favorable seasons.

We now propose to give a few plain suggestions in regard to vine culture, which we are enabled to make from some personal experience, from observation, and a pretty extensive reading of the practices of the successful grape growers of New England: And first,

Of Soil and Position.—If a person will allow his mind to recur to the *position* and the *soil* where he has often seen the grape-vine growing in a wild state, he will find that it is usually in some sheltered nook, looking out upon the warm south, where the vines can stretch away over the tops of alders or young maples, and bathe in the sunlight and elaborate the juices which are to perfect their seeds,—and that the soil is not a compact, clayey one, but is a rich, sandy loam, kept light and porous by numerous stones and the roots of the surrounding growth. Here, then, is a hint from Nature herself, teaching us in what *position* and in what kind of *soil* to place our young plant. If the subsoil be stony or gravelly, so much the better; for the roots will run with eagerness into all the clefts, crevices and openings in which such subsoils abound. In these dry and warm situations the roots will spread themselves in every direction, and throw out innumerable fibres to cling around the warm stones, and extract from among them their peculiar food. This, then, suggests to us what

A Border Ought to be.—By *a border* is meant the strip of earth into which the root is to be planted. The *position* of the border, as has already been suggested, should be a cozy nook, facing the south, if possible. Then let it be sufficiently long to accommodate the number of plants to be set; the distance they are to stand from each other may be five to ten feet, to suit the fancy or to conform to the mode in which it is intended to prune them—as sometimes the vine is wanted *for shade* as well as fruit. If the soil is loose and gravelly below, it is not absolutely necessary to throw out the subsoil; but to secure a rapid growth and prolific bearers, it is best to dig down about three feet, and to fill the lower part with broken stones, oyster or clam shells, or especially old bones, and then fill in with the top soil that was removed, mingled with common barn manure, leaves, chip-dirt, &c., until the border is two or three inches higher than the surrounding soil. This will form a border and a bed in which the young roots of the plant will freely travel and find food, and particularly when they get down among the shells and the bones. Another advantage of such a distinctly defined border is, that you may cover it with leaves or

straw in the autumn, and thus keep the roots warm, and perhaps gaining strength for their summer labor. The border now being prepared, our first cut will show the usual appearance of the plant as received from the nursery, and the

Fig. 1.—Vine as obtained from nursery, with straggling shoots.

Fig. 2.—The same pruned when set out.

manner in which it ought to be pruned before it is set out. Now let the single shoot grow till about the first of autumn, then pinch off the end, so that the wood that has grown may become mature. Any *side-shoots* that appear during the summer should not be allowed to take a rank growth, but kept headed down, subordinate to the leading shoot, though perhaps not entirely eradicated from the stem. Our next cut will give the

Fig. 3.—Growth at end of first summer from setting out.

Fig. 4.—Growth at end of second summer from setting out.

Appearance of the Plant the Second Year.—The single strong shoot made the first year, (fig. 2,) should be cut down to three or four buds, only two shoots from which should be allowed to grow, the others being rubbed off, and the laterals, should any appear, pinched off at the ends, but not entirely removed, because it is believed they promote the general growth of the main stem. Pinch off the end of the shoot in autumn as before, and continue this process until the vine sends up a strong main stem as high as is desired. Any fruit which sets, with the exception of a single bunch, should be removed, as in perfecting fruit the vigor of the vine itself is retarded. Our next cut

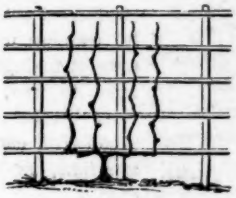


Fig. 5.—Growth at end of third summer from settting out.

Shows the Vine in the Spring of the Third Year.—The two shoots made during the second year, (fig. 4,) are now extended each way horizontally, and fastened to the newly-erected trellis. These horizontal branches, termed *arms*, are to be cut back at the same time, so as to leave two good buds on each, so that four shoots, two on each side, may spring up from them; observing what has heretofore been said as to suckers or side branches. The four shoots, as they advance in growth, should be tied to the trellis, in the position that the figure represents. This brings us to the next illustration,

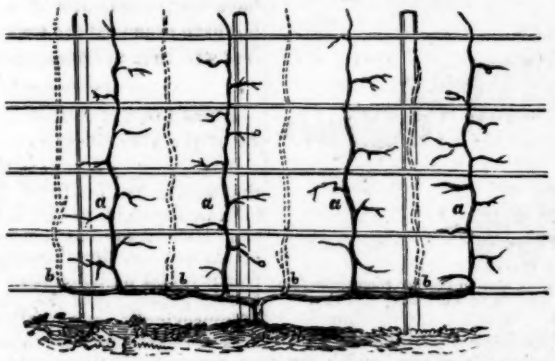


Fig. 6.—A full-grown grape vine, trained on the alternate or renewal system—the dark vines, the present year's bearer—the dotted ones, growing this year, for bearing next.

Showing the Cane or Renewal System. By recapitulating a little we can now show the whole matter distinctly: The first season one branch is trained up; in the fall this is cut back to 3 or 4 eyes, and the next season another is trained up and the first is extended; both are then laid down and trained horizontally, near the surface; and from each a cane is trained up, as pointed out by the letters *a*, *a*. The next season these will bear fruit, and two more canes, *b*, *b*, as shown by the dotted lines, will be trained up to bear fruit the following season, when the stems, *a*, *a*, are cut

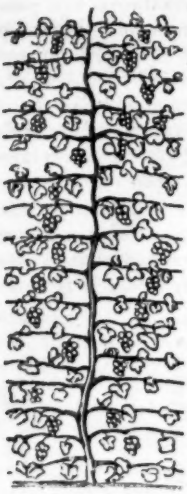


Fig. 7.—Spur pruning.

out near the horizontal branch, leaving one eye, and then new shoots trained, and so on.

The Spur System—Is the training up of the main stem, and of spurs horizontally, cutting back the spurs annually to 2, 3, or 4 eyes of the new wood, according to the strength of the vine, and number of spurs. When the spurs have extended too far, cut out a part, yearly, training up new ones, thus changing all the old wood to new, and as the vines become old and unproductive, cut down part at a time, and train up new ones.

The Pinching off of the Ends of the Side branches is illustrated at *b*, *c*. The branch has fruit upon it, but is still stretching away in a new growth; by *pinching* it off at the dotted line above *c*, the growth will be retarded and the wood and fruit more thoroughly ripened. It must

Fig. 8.—Portion of a grape vine in bearing, representing the bearing branches, from the sides of a last year's vine.

be remembered that the vine *always bears the fruit on the present year's shoots*, which have sprung from buds on the previous year's growth. The ripening of the fruit depends on healthy, well-developed leaves, which supply food to the forming berries, and therefore they should not be taken off, as some say they do, to "let in the sun."

Manures for the Grape.—Green, unfermented, rank manure, is not the best—but a compost of barn manure, rich loam, slops from the sink-drain, and mould from the forest, are all excellent when mixed. If this is scattered over the surface and worked under two or three inches, the roots will not fail to find their virtues.

How Grapes may be kept.—The most simple mode of doing this, is to prepare cheap boxes six or eight inches high, and of any convenient length or breadth, and place them in layers two or three deep, with merely a clean paper between them, leaving the boxes uncovered for a few days for evaporation to take place, and then place them in a cool, dry spot. They are also kept in barrels, packed in layers of cotton.

We close this already too long article with a few practical general rules for pruning the vine:

1. In pruning, always cut upwards, and in a sloping direction.

2. Always leave an inch of blank wood beyond the terminal bud, and let the cut be on the opposite side of the bud.

3. Prune so as to leave as few wounds as possible, and let the surface of every cut be perfectly smooth.

4. In cutting out an old branch, prune it even with the parent limb, that the wound may quickly heal.

5. Prune so as to obtain the quantity of fruit desired on the smallest number of shoots possible.

6. Never prune in the months of March, April or May.

7. Let the autumnal pruning take place as soon after the first of October as the gathering of the fruit will permit.

In the preparation of the foregoing article, we have not trusted entirely to our own experience, but have examined the works of the best cultivators who have written upon the subject.

ESSEX COUNTY MODEL FARM.—A correspondent of the *Traveller* writes:

"Your readers may not generally be aware that the late Dr. Treadwell left by will, his valuable farm in Topsfield, to the Essex County Agricultural Society, to come into possession of the same on the death of Mrs. Treadwell. The widow died recently, and we understand the society are about to take possession of the premises with the view of improving it under the management of the offices of the society, and to make it a model farm. The property of the society will be all centred there, and henceforth the cattle shows will be held on the premises instead of being changed from year to year to different parts of the county. This will be a decided improvement and on account of the central position of Topsfield, much more convenient for all parts of the county."

☞ To raise esteem, we must benefit others; to procure love, we must please them.

LEGISLATIVE AGRICULTURAL MEETING.

On the occasion of the first meeting, we were absent, in attendance upon the meetings of the U. S. Agricultural Society at Washington. Sickness prevented us from attending the meeting on Tuesday evening, and not having been able to secure the services of a competent reporter, we take the following account of the meeting from the *Daily Journal:*

The second Legislative Agricultural meeting was held on Tuesday evening, in the hall of the House of Representatives.

Hon. MARSHALL P. WILDER presided. On taking the chair, he expressed his pleasure in being able to take a part in the discussions incident to the series of meetings in progress. He then announced the subject of the evening's discussion, and proceeded to speak of the Chinese Sugar Cane. Too much had been expected of this plant, but considering the backward condition of its congener, Indian Corn, the past season, the experiment of its culture might be considered successful. It had been well ascertained that its culture for syrup was extremely profitable. That it would crystalize had also been well demonstrated by J. S. Lovering, of Philadelphia, from a letter of whom extracts were read. His experiments covered 67 days. The cane which was cut from the 2d to the 6th of November yielded a juice which crystalized with the greatest facility. Specimens of fine, dry brown sugar and excellent loaf sugar of his raising were exhibited. It grew at the rate of 1221 lbs. to the acre, beside 74 gallons of syrup. He found the best time to cut the plant to be when most if not all the seeds are ripe, and after several frosts.

In concluding, Mr. Wilder introduced to the audience Mr. LEONARD WRAY, of London, a gentleman well known in connection with the subject under discussion. Mr. Wray said that the African Imphee was undoubtedly identical with the Chinese plant. His experience as a sugar planter in East and West Indies confirmed the statement of Mr. Lovering in regard to the best time of cutting the plant. He believed the plant had a great future in this country, and the result of the crude experiments which had been tried should not be taken as tests. The African Imphee would not only produce bountifully of syrup, but wonderfully so of grain, and was one of the greatest blessings God ever gave to man.

Mr. LAKE, of Topsfield, said the cane should be planted upon warm soil. Cane grown on high land had more of the saccharine matter. The plant, if partially dried before the juice was expressed, yielded more saccharine matter. There was no doubt about the profit of the crop, and the speaker predicted next season an increase of one-third over the crop of last season.

The meeting was also addressed by Dr. CHARLES T. JACKSON, who coincided with the previous speakers as to the crystalizing properties of the plant, the time at which it should be cut, and the probable success of its culture.

Mr. BUCKMINSTER, of the *Ploughman*, exhibited a new specimen of squash, called the "Hubbard," possessing a hard shell, and a fine, yellow grain.

At the next meeting the topic of discussion will be "The cultivation of the Sugar Beet." Mr. Wray is expected to give the meeting some of the results of his observations of this culture.

We hope to be able to give a fuller report next week, and to keep our readers as well informed as in former years, of the doings at these meetings.

For the New England Farmer.

DR. LORING'S REPORT—SCIENCE AND EXPERIENCE.

BY WILSON FLAGG.

All true science is based upon facts. It may receive numerous hints and suggestions from theory and hypothesis, but facts are the only tests of truth. Though many great philosophers have not been "practical men," they have always established their opinions upon facts which they have diligently gathered from the experience and observation of others. If a by-stander be a philosopher, he gains a great deal more knowledge from those who are busy around him, in their respective employments, than they can learn who are at work; for while their attention is necessarily confined to their own occupation, he is learning something from every one of them. Facts may be learned in a multitude of ways:—from the experience of others, from our own experience and practice, and from experiments purposely made to ascertain the correctness of a theory or a doubtful assertion. It is evident that facts gathered entirely from one's own experience and practice, must necessarily be very limited, because they are confined to the narrow sphere of his own avocations. He only can obtain a comprehensive knowledge of facts who devotes himself to the collection of them from the multitudes among whom they are scattered.

The true method of forming a system of agriculture, based on practical experience, is not therefore to become a practical farmer, but to collect from the whole mass of intelligent farmers all the facts which they have learned from their own practice. It is thus the wisdom of the whole is brought into one view, and each individual is enabled to profit from every one's experience. It is not to be assumed that every farmer, however intelligent, knows all the facts which would be necessary to constitute the ground-work of a perfect system of agriculture. But among all the farmers in the country, there is a vast amount of practical information, not yet recorded in books, which if gathered into a volume and systematized, would be of immense value. Almost every man has learned some fact which is unknown to the generality of those who pursue the same occupation. Almost every man has some experience, with which no other person is so well acquainted as himself. Suppose every farmer in a certain county has obtained the knowledge of one important fact, and only one, and that no other person knows this fact; while each man's knowledge is thus confined to himself, it is of no service to the community. But were some person of intelligent and scientific mind to go round and gather all these facts, classify and arrange them in a clear and intelligible manner, and then read them to an audience of all these farmers—what

can be more apparent than that those who listened must be vastly wiser than they were before? Every individual has communicated his spark towards the formation of a permanent blaze of scientific light.

The object of our agricultural societies should be to gather these facts, and reduce them to system. By such a method, they would establish a foundation for the enlightened practice of agriculture, on the true Baconian system of philosophy. Nothing would be left to idle conjecture. Every idea would be deduced from the actual practice of men who have devoted their lives to experience. He who collects this information is not himself the instructor of the agricultural community; but the whole mass of farmers, through him as a medium of communication, instruct each other. In this way science, sitting at the foot-stool of common sense and enlightened practice, arranges and systematizes what she obtains from every man who has learned any new fact.

Gentlemen have been sent abroad to collect information from the experience of foreign agriculturists; and the knowledge thus obtained is of high value. But the most important of all knowledge to the farmer is that which is exactly applicable to the agriculture of his own district. The experience of the mass of farmers in New England is more valuable to the New England farmer than that of the farmers in any foreign country or section. The practice of agriculture must vary not only with every country, but with every district. Even two districts lying contiguous to one another may, in many respects, require a different practice, which is modified by climate; by the geological character of the place; by the length of time it has been under cultivation; by its moisture and dryness; by its elevation, and by the depth and native fertility of the soil. It must be affected also by the nearness or distance of a market, and by the extent and the demands of that market.

Hence the most valuable information for a farmer, in any county, is that which is derived from the experience of the farmers in that particular county. If a few individuals, without superior advantages of capital or location, have been remarkably successful in their farming, the experience of such men could not fail to be useful to others in the same district. But it would not necessarily follow, that the experience of a successful farmer in Ohio or Michigan, or even in the western part of Massachusetts, would be valuable to a farmer in Essex county.

I have been led into this train of reasoning, by the perusal of the ingenious and eloquent report of Dr. Geo. B. Loring, "On Farms," in the Essex Agricultural Transactions, for 1857. He recommends "that the services of a competent person be secured by the Society, to collect such information from the farmers of this county as will secure" certain educational purposes mentioned in his report. His object is to combine all the experience of the farmers of that county, from which a manual might be compiled, for the use of the pupils of an agricultural school, and for the private instruction of all who are engaged in agricultural pursuits.

By carrying out this project of Dr. Loring's, the county would be made, as it were, one grand experimental farm, in which a thousand diligent hands and practical minds are constantly engaged in learning new facts, testing the value of newly discovered plants, newly invented implements, and new ways and means of tilling and improving the soil. The Society, through the instrumentality of their agent employed for this purpose, collect the results of all this experience, so that the wisdom of no man, however humble, shall perish with him, and be lost to the world.

For the New England Farmer.

THE THINGS I RAISE---No. 7.

DAVIS SEEDLING POTATO.

This is one of the very best potatoes grown, taking everything into consideration, size, productiveness, hardiness, &c. I do not mean to say it is of the best quality for eating when compared with the State of Maine or Carter; but I do mean that it is a good eating potato, which added to all its other good qualities, makes it a very desirable variety. Its color is red outside and white inside, slightly tinged with pink just under the skin; large size, and very free from rot. This variety originated in Sterling, Mass., and has been under cultivation some eight or ten years. It is so far superior to Peach Blows, Vermont Whites, Pink Eyes, and those common sorts that are raised in the country, that I should advise all who grow potatoes for market in fall or winter to raise this sort for one. It requires a full season to mature. It yielded better than any other out of the forty kinds I raised last year.

STATE OF MAINE.

This is a fine eating potato, unsurpassed by any in the whole list, not excepting the Riley or Carter. It is not more than half as productive as the Davis, but superior in quality for the table. It is white outside and inside, and shaped somewhat like the White Chenango. This variety is quite early, being not more than a week later than the Chenango, to which it is superior. Should not consider it so profitable a variety for the market, except for early, as the above named variety.

JACKSON WHITE.

A sort of recent introduction, and promises well. I have grown it two years with fair success, but have never had it dry and mealy as the State of Maine. This is a white potato, nearly round, medium size, eyes deeply sunk, fair as to productiveness and hardiness, worthy of trial.

ST. HELENA.

This is an old and well known sort that was formerly cultivated in this region, but for some years has been neglected, but now comes out under other names, such as Laplander, White Mountain Seedling, &c. It is a very productive sort, very handsome on account of its good size and whiteness. Quite free from the rot. This potato is apt to be soggy, and for that reason is not so highly esteemed. JAMES F. C. HYDE.

Newton Centre, Jan. 18, 1858.

A SILLY REPORT, which has gained circulation and believers, that the seed of the Chinese sugar cane was poisonous has been put down by

Mr. D. J. Browne, of the Patent Office, who says that he has seen horses, cattle, poultry and swine feed upon it freely, both in an unripe and a mature state, without the slightest symptoms of injury or disease. Bread has been made from the flour in Texas, which was of a pinkish color, but was palatable, and no injury was suffered by those who ate of it. It is true, the seeds are very hard and almost indigestible, and should never be used in an unground state.

THIRD LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE N. E. FARMER BY ZENAS T. HAINES.]

THE CULTURE OF THE SUGAR BEET, AND ITS MANUFACTURE INTO SUGAR.

The third of the current series of Legislative Agricultural Meetings was held in the Hall of the House of Representatives last Tuesday evening. The attendance was rather small. Mr. FELTON, Senator from Worcester, presided, and in opening the meeting, announced the subject of discussion to be, "*The culture of the Sugar Beet, and its manufacture into Sugar.*" He said he had the satisfaction to introduce to the audience Mr. LEONARD WRAY, of England, who had consented to deliver an address on the subject announced.

Not many years ago, said Mr. WRAY, in commencing, the beet root was not known as a plant of more value than the turnip; but in the wars of Napoleon it was brought into extensive notice. When France was in a manner sealed up, Napoleon had to foster the beet plant as the only source for obtaining sugar; since then it had gradually and extensively increased. The other nations of the Continent saw the benefits which France had derived from its culture, and now 175,000 tons of pure refined beet sugar are annually made on the Continent. Its average yield was comparatively small, but in some districts it yields very largely. Its culture was still spreading in Belgium and Russia. In France, in 1854, there were 354 sugar manufactories. But in addition to this, proof spirit was also extracted from the root. Last year the value of this item alone in France was $10,000,000. It was a mistaken idea, said the speaker, that this culture had injured France. The effect has been entirely to her benefit. The farmer who sells it to the manufacturer by weight found it extremely profitable. Hence he manured his land heavily, and obtained very large and very undesirable roots for sugar. To have a beet root in perfection for sugar-making, it should only weigh from 2 to 2½ lbs. By planting it at small distances apart, and manuring properly, the desirable size can be obtained. Increasing the size of the beet root decreased the quantity of sugar. Here was seen an antagonism between the cultivator and manufacturer. Such antagonism, he apprehended, would not occur here, where so much enlightenment among agriculturists existed. The beet contained a very large amount of sugar, but its product had been greatly disproportioned to the sugar in the plant. Mr. WRAY here exhibited some simple beet juice which he had that day expressed from a beet selected at random, which he said, measured to his astonishment, *nine* by the saccharometer—a number representing 16 per cent. of sugar or saccharine matter, or as rich as the cane of Louisiana. The juice was very dark, and much richer than that expressed from beets grown in France.

The leaves and crowns of the beet furnished two or three tons of fine vegetable matter to the acre, which was very good for cattle. A farmer in England saved a quantity of white beet and mangel wurtzel leaves, which he carefully buried in a pit, with a layer of straw between them and the earth. After eight or ten months he opened the pit and found a soft unpleasant-looking mass, which, upon experiment, he found was eaten with avidity by his cattle, and to the greatly increased yield of milk by his dairy cows.

The pulp left after the expression of the juice was purchased by the French farmer, who found it better for feeding to cattle than the beet itself, for the reason that certain injurious salts were removed with the saccharine juice. He thus gets back not only food for his stock, but valuable manure. Pigs, also, fatted readily on the pulp, especially if it was mixed with a little meal.

The speaker then spoke of the manufacture of alcohol from the beet root. It yielded a valuable spirit, which sold for 75 cts. per gallon. A French farmer from 420 acres of land of moderate quality, and of a slightly calcareous nature, netted over $73,000 in proof spirit.

The process of manufacturing the spirit was described according to the practice of Laplay, a celebrated cultivator of the beet root. The beets were cut into long, thin pieces, the fermentation being commenced in the piece. They were then put into a cistern containing a portion of fermenting juice, to which was added a quantity of sulphuric acid. After two days it was put into a cylinder and steam let in upon it. The steam passes through the mass, cooking it and depriving it of its alcohol, and leaving it in the finest possible condition for cattle. For this cooked pulp farmer were glad to give one ton of beets for two of the former. From a hundred tons of beet roots, 70 tons of the pulp might be obtained, and it might be kept two years. Its value for cattle in New England was alluded to.

The speaker called attention to the immense consumption of sugar in the United States. In 1855 and 1856 we raised 123,468 tons of sugar, and imported double the amount, making a drain on the country of $25,529,200.

The speaker thought this drain might be avoided by devoting our New England lands to the culture of the sugar beet, and thus inducing men to cultivate the beet, instead of going to the West. He had seen much excellent land in Massachusetts for this culture, lying idle, instead of yielding $200 to the acre, as it might. Then it would afford employment to the poor classes in that time of trial, the winter season. This was an important consideration. It would be a comfortable and pleasant occupation, to work in a beet-root sugar factory. The speaker liked to see ruddy women hoeing the beet-root. He did not consider it a degrading occupation, but one conducive to health, and involving a principle important to us all. He spoke particularly upon this point, because he deemed the labor of women important in connection with this culture.

In many places in France there were small distilleries, which were called agricultural distilleries, in which the farmer worked up his own crop, and by which he could obtain 419 gallons of proof spirit to the acre, beside 70 per cent. of the cosset, or pulp.

The capability of this country for this culture was undoubted. They had seen the remarkable result of his own experiment, before alluded to. It was a fair trial. The beet was selected hap hazard, but yielded an uncommonly rich juice. In France it generally marks, by the saccharometer, but 5, but here was juice marking 9.

Some beet-root sugar was here exhibited by the speaker. It appeared similar to refined loaf sugar, in the purity of its taste and color. All beet-root sugar that comes into commerce was white, for the reason that a disagreeable smell and taste belonged to it, in a less refined state. Calculating from the crude beet, they get 5 per cent. of this pure sugar, 80 per cent. of the juice, and 20 per cent. of the pulpy matter.

The specimen of sugar alluded to was grown in Konisberg, Prussia, and was brought to the meeting by Mr. CUNNINGHAM, of Boston.

The process of making sugar from the beet was next described. The juice was received into defecators, and a quantity of finely sifted lime added. Steam was then let on, and its action caused a skum to be thrown to the surface. When the juice was quite clear, the steam was thrown off, and the juice allowed to subside. The juice was then let off from the bottom into an animal charcoal filter. In passing through it became decolorized and deprived of all feculent matter, and came out very clear and bright. If the charcoal was new, the liquid would be nearly as white as water. It was then passed into a conical vessel, and finally into evaporators, thence into a clarifier with fresh milk and finely powdered charcoal, and then submitted to another filtration, by which the juice was made quite white. It was then put into the vacuum pan and boiled down into a granulating syrup. A ton of animal charcoal was used to a ton of sugar, and would be very expensive but for its capability of being reburnt and restored to its original power.

Mr. FRENCH, of Braintree, had never found but one instance where the beet could be grown successively on the same soil with profit. The crop should be alternated. He believed that the culture might be profitable. With reference to the labor of women, alluded to by Mr. WRAY, he hoped never to see women in the field, or any other out-door work, unless in that of the cultivation of a flower-garden.

He would not undertake to grow beets after beets or peas. It was an old adage that where our fathers lived we could live, and if it could be grown in the old country successfully it might be done here, and by the work of men. He believed the culture would ultimately be introduced.

Mr. BUCKMINSTER, of the *Ploughman*, would be glad to have a class of females about the cities, getting a livelihood by sewing and selling candy, work at the manufacture of sugar. He was also glad to be rebuked by Mr. WRAY for the national practice of going abroad for that which we might grow, with so much facility, at home.

Mr. WRAY was asked as to the law of succession in the culture of the beet, and replied that the law of the exhaustion of soil applied to the culture of this root, as well as other crops. It draws from the subsoil its potash, and that returned to the soil, of course enriched it. He would recommend the use of the subsoil plow, and rotation of crops.

Mr. BROOKS, of Princeton, wanted to know how the soil could be exhausted if the residuum of the beet which contained the potash of the plant should be returned? He has raised beets for seven or eight successive years, by plentiful manuring the same soil.

Mr. WRAY said they did produce in France beets year after year on the same soil, but they were full of salts, and contained comparatively but little saccharine matter. It was only by highly artificial means that beets could be produced in this manner. It takes the great body of its potash from the subsoil, and was rapidly exhaustive of the soil.

Mr. FRENCH could not see how the soil would be exhausted if the fructifying properties in the beet were all returned.

Mr. WRAY said that Liebig assured us that every plant leaves its excrement in the soil, and this was an argument in favor of the rotation of crops. Plants would be injured by their own excrementitious matter.

Mr. FRENCH said that Liebig also said that every plant contains enough to re-produce itself.

Mr. FLINT, Secretary of the Board of Agriculture, moved that the thanks of the Society be tendered to Mr. WRAY for his interesting remarks. Carried.

The Chairman then announced that the subject of discussion at the meeting next week would be "*The preparation and application of Manures.*"

TO CORRESPONDENTS.

Many favors of our attentive correspondents have been received, which we cannot lay before the reader in a single sheet. Among these are "*Crops on Peat Meadows,*" "*Witch Grass,*" "*Sawed Shingles,*" "*Crows,*" "*A Day at Brighton,*" "*How to Prevent Hard Times,*" "*Egyptian Millet,*" "*A Farmer's Club,*" "*Real Estate in Rutland Co., Vt.,*" "*Value of Muck,*" "*Analysis of Soils,*" "*A Plea for the Robin,*" "*Leaves from a Lady's Note Book,*" "*Salt Marshes,*" "*Young Men on the Farm,*" "*Laying down Inundated Lands,*" and many other articles.

These articles are all of a practical character, most of them written by persons occupying and laboring on the farm, and who are qualified to speak from an experimental knowledge of the matters they discuss. Others are from ingenious and observing mechanics, who have too much sympathy with the world to hide the light which they are able to reveal: while some are graduates of our best universities, gentlemen who have not only qualified themselves to decide with just discrimination, to investigate with sound judgment, and to make such researches in our beautiful and attractive art as the common farmer can scarcely be expected to make, but whose love of the garden and the farm have scarcely known a limit, and whose practical operations have gone on even-handed with their untiring investigations and experiments in the soil itself. Besides this, there are occasional articles written by women of great intelligence, of close observation, and of much practical skill in horticulture and all that relates to the orchard and garden, added to those femenine graces which seldom fail to excite a love of the moral and beautiful in the young, and obliterate from their hearts a too common aversion to the farm. It would afford us pleasure, if it were proper, to mention the names of several such, and briefly sketch some of the benefits which they have conferred upon those whose occupation it is to cultivate the soil. If anything can impart value to an agricultural periodical, it must be such concise and practical articles as these; they are worth infinitely more than lengthened and finely-written essays, fresh and vigorous as they are from active hands and warm hearts.

We trust there will be no diminution of such healthy articles—the pure gold from the mine, and it shall be our care to communicate them to the working world in due season, on the fair pages of the *Farmer.*

It gives us pleasure to acknowledge our obligations to as able and intelligent a corps of writers, both male and female, we believe, as ever occupied the columns of any newspaper in New England.

TO PREVENT RABBITS from barking young fruit trees, give the body of the young tree a thorough rubbing with soft soap. This not only prevents the rabbits from barking them, but it protects them against insects, takes all the rough scales off, softens the bark, and renders them much more thrifty than they would be otherwise. This simple recipe will be of vast value to the farmers in many parts of the West.—Greasing will prevent rabbits from barking fruit trees but it will also injure the tree.—*Maine Farmer.*

BOYS' DEPARTMENT.

THE SCHOOL-HOUSE.

Scuffling should never be attempted nor permitted in the school-house, whatever the temptation may be. When a tempting chance is presented to knock off a playmate's cap, or knock an apple or snowball out of the hand, or do anything else that might by possibility result in a scuffle, you must not do it. Scuffle to your heart's content at the right time and place,—but the school-house is not the right place, nor study hours the right time. And you must not play at hop-skip-and-jump on the seats and desks. There is no good reason why you should take liberties in the school-room that would be improper in the parlor at home. Some scholars have the habit of dropping their apple cores and the crumbs from the dinner basket upon the floor, and throwing away pieces of bread on the floor with the butter side always down, and of dripping the water from their slates to the floor, and the disgusting habit of spitting on the floor. You must do no such thing. With the best judgment, and the utmost care, the atmosphere of a school-room is unhealthy; and every pupil, and every other person who goes into a school-house, should cheerfully do all that can be done to preserve the beauty and purity of the entire premises. And if anybody is so abusive as to bring tobacco into the school-house, and the teacher does not peremptorily prevent it—or if anybody brings tobacco there at an evening or Sunday meeting—go to the trustees with a complaint; and if they do their duty they will put the tobacco-users out of the house with as much promptitude and as little ceremony as we drive the cat out of the larder, or a pig out of the garden—or a skunk out of the cellar. And if the trustees have a noisome chew in the mouth and a filthy pipe in the pocket, and therefore do not heed your complaint, go to the chancellor for an injunction against the nuisance.

As it is of great importance that the ground

around the school-room should be ornamented with trees and shrubbery, if it has not already been done, you may pleasantly amuse yourselves some of the stormy noontimes by drawing plans on your slates, showing after the forest trees have been duly placed, how you will plant a lilac in this spot, a snowball in that, an eglantine under one window, a cabbage-rose under another, with snow-drops between, and so on, till every place not wanted for play and play-houses has something ornamental upon it. And do not fail to intermingle with the trees, the moosemissie, the barberry and the like, whose tempting red fruit will invite the robins in the autumn, and perhaps induce them to return and nestle there in the summer.

And every district that is pecuniarily able should give the interior of the house an agreeable and elevating aspect by hanging the walls with historic prints and paintings.—*Independent Standard.*

OBSERVATION.—The habit of observation is one of the most valuable in life, its worth can never be too highly estimated, and it is one that can easily be cultivated. Never do anything without observing that all you do is correct. Do not ever take a walk without having your eyes and ears open, and always try and remember what you see and hear. By this means you will acquire more knowledge than can ever be learned from books, as you will find the information in exactly the form you are capable of receiving it. Read books and newspapers, but above all acquire observing habits, for they will be always with you, and ever ready to store your mind with the truths of nature.

LADIES' DEPARTMENT.

DRESS.

I am inclined to concur with the spirit of a remark once made by a distinguished country woman, I cannot at this moment call her name to mind, who thus expressed herself:—"I never will forgive a woman for being ill-dressed, or for bestowing a thought on her toilet after it is once completed."

A slatternly, dowdily dressed woman is no pleasing object of contemplation; neither is one who is everlastingly conscious of her costly robes and sparkling gems, who values herself, and expects to be valued, for those outward adornments that perish in the using.

It is well to be neatly, tastefully, appropriately attired, but it is *not* well that woman's profoundest studies should be confined to books and plates of fashion; that her loftiest aspirations should centre in her wardrobe and her jewel-case. Assuredly, my fair countrywomen, we are capable of nobler aims than these.

With an immortal destiny awaiting us, shall we fritter away the energies that were granted unto us for the accomplishment of far more exalted purposes, in pampering and adorning the frail body that so soon must see corruption, to the neglect of those higher and more enduring portions of our being over which death has no power? Shall this "mortal coil," that we must so soon shake off, engross our almost exclusive attention, while the poor hungry soul that should be developing for a glorious immortality, is left to starve on the husks and vanities of life?

Rather, let us make "goodly apparel" the subject of minor importance that it ever is, and ought to be, to a well regulated mind; and daily study so to live that, when we are called upon to lay down what, to each and every one of us, should have been the priceless boon of earthly existence, we may not cry out, in unavailing anguish, "Our days have been altogether vanity and vexation of spirit; and now when death, like a thief in the night, hath stolen upon us unawares, our eyes strive vainly to pierce the thick darkness that hides from our failing vision the golden gate opening upon a blissful immortality."—*Traveller.*

DOMESTIC RECEIPTS.

FLOUR PUDDING.—Beat two eggs and a little milk, and stir in five table spoons full of flour, making a batter. Boil one quart of milk, and when it boils pour in the batter, stirring well while it is poured in. Let it boil slowly for a few minutes. Eat it with sweetened cream or milk, or whatever sauce suits best your palate. It is a cheap, quick way of making a very pleasant and wholesome desert.

Wheat meal, unbolted flour, can be used instead of flour, which to our taste is still better. This is a home dish which we prize much. If we could introduce it into general use, we should almost esteem ourselves a benefactor.—*Valley Farmer.*

BREAD.—Dry bread, crusts, stale biscuit, etc., I always soak in warm water, mash fine and mix with milk, when I make bread. The loaves will not be so white, but will be moister—besides, it is economical, and every housewife must be saving these hard times. All the cold potatoes that are not hashed with meat, come to our table the second time metamorphosed into light loaves of bread.

MEAT.—The best way to use pickled pork, if it is too salt, is to cut it in slices, and soak it over night in milk and water, then roll each piece in flour, and fry in a little butter, the same as fresh fish. It is nice for a change.

BEANS.—For laboring men at this season of the year, there is nothing more nutritious and wholesome; besides, there is no other food of which a little will go so far and do so much good. Boil them three hours in plenty of water, with a piece of pork to flavor them just right. Put in pepper as soon as they come to the boil; when cooked a lump of butter and some cream or good milk. The meat and butter generally makes them salt enough. If there is plenty of soup about them, take them to the table in a deep dish lined with bread crumbs.

SALT FISH.—My way of cooking salt fish is, to soak them well, then wrap and tie them in a piece of old, thin white muslin, and boil them in plenty of water. Untie carefully, so they wont break to pieces, and season with butter and pepper.